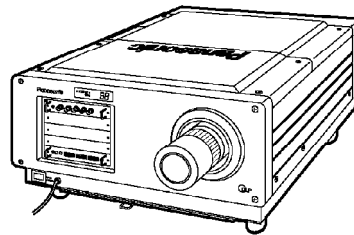


ORDER NO. VED0103309C5

Service Manual

DLP™ based Projector

PT-D8500U / PT-D8500E



SPECIFICATIONS

The service technician is required to read and follow the "Safety Precautions" and "Important Safety Notice" in this service Manual.

Specifications

Power supply:
200 V - 240 V AC (single-phase, 3-wire), 11 A (Max.)

Power consumption:
1.9 kW
Approx. 2.8 W during standby (when cooling fan is stopped)

Operating environment temperature:
0 °C - 40 °C : NORMAL lamp power
0 °C - 35 °C : HIGH lamp power
If the power is turned on when the temperature is around 0 °C, a warming-up time of about five minutes will be required before a picture can be projected.

Storage environment:
Temperature: -25 °C - 65 °C Humidity: 10 % - 80 %
(with no condensation)

DMD™ elements:
Element size: 0.9 inches (aspect ratio : 4:3)
Display method: 3 DMD™ elements, DLP™ system
Pixels: 1 024 dots X 768 lines, (3 sheets)

Lamp:
1 200 W Xenon lamp
(recommended replacement period 1 000 hours)

Luminosity:
6 000 lm (ANSI) : LAMP POWER NORMAL
7 000 lm (ANSI) : LAMP POWER HIGH

Projection method:
Ceiling or Floor / Front or Rear (menu selectable)

Keystone compensation:
Max. elevation angle : ±10° or less

Optical axis shift volume:
Top and bottom : 10/0 - 0/10
Left and right : 8/2 - 2/8 (electromotion)

Projection screen size:
Between 2.5 m and 15 m when separate zoom lens is fitted
Between 2.5 m and 4.5 m when separate fixed focus lens is fitted

Screen aspect ratio:
4:3 when separate zoom lens or fixed focus lens is fitted

Input signals:
Standard analog RGB input : BNC termination X 5
Video signal input block Impedance: 75 Ω
Sync signal input block Impedance: 75 Ω
R/PB/Cr : 0.7 V [p-p]
G/Y : 0.7 V [p-p]
(1.0 V [p-p] when SYNC ON G/Y signal is input)
B/PB/Cb : 0.7 V [p-p]
Composite sync : 0.6 V [p-p] - 4.0 V [p-p]
Separate sync : 0.6 V [p-p] - 4.0 V [p-p]
Analog RGB input signal
fH : 15 kHz-100 kHz, fV : 24 Hz-120 Hz, dot clock frequency: 20 MHz-162 MHz
Color difference input signal
Applicable formats: 480i, 576i, 480p, 720/60p,
1080/60i(1035/60i)1080/50i, 1080/30p,
1080/25p, 1080/24p, 1080/24sF

With ET-MD95VM2 video signal (NTSC, NTSC4.43, PAL, SECAM, PAL-M, PAL60, PAL-N) input module (sold separately) installed
Video signal : 1.0 V [p-p] Impedance: 75 Ω BNC termination
Y signal : 1.0 V [p-p] Impedance: 75 Ω BNC termination
C signal : 0.286 V [p-p] Impedance: 75 Ω BNC termination

Cb signal : 0.7 V [p-p] Impedance: 75 Ω BNC termination
Cr signal : 0.7 V [p-p] Impedance: 75 Ω BNC termination
With serial digital input module (sold separately) installed
ET-MD95SD1 (for 480i/576i)
SERIAL IN (SMPT259M) BNC termination
SERIAL OUT (SMPT259M) BNC termination
ET-MD95SD2 (for 480p/480i/576i)
SERIAL MAIN IN/SUB IN(SMPT259M/294M) BNC termination
SERIAL MAIN OUT/SUB OUT(SMPT259M/294M) BNC termination
ET-MD95SD3 (for HD SDI)
HD SERIAL IN(SMPT259M) BNC termination
HD SERIAL OUT(SMPT259M) BNC termination
With ET-MD95T TMDs input module(sold separately)installed
MDR26 connector
Applicable signals SVGA, XGA, SXGA

Contrast ratio:
450:1 (100% black-and-white pattern)

Connection terminals:
3 input module connection slots
Analog RGB input : BNC termination X 5
RS-232C input/output connectors : D-SUB 9-pin X 2 for computer control
REMOTE IN 1 connector : D-SUB 9-pin for external control
REMOTE 2 IN/OUT terminals : M3 pin jack X 2 For wired remote control unit and serial control

Power cord length: 2.5 m
Cabinet: Aluminium, plastic (denatured)
Weight: 80 kg (not including separate projection lens)
Dimensions: 68 cm (W) X 39 cm (H) [including legs] X 97.3 cm (D)

<Remote control unit>
Number of functions: 34 (including lighting function)
Power supply: 3 V DC (AA batteries X 4)

Operating range:
Within approx. 12 m directly in front of receptor (when operated as wireless unit)
Within 15 m (when operated as wired unit)

Weight: Approx. 350 g (including batteries)
Dimensions: 14.0 cm (W) X 3.6 cm (H) X 18.1 cm (L)

Accessories:
Remote control unit : 1
AA-size batteries: 4
Remote control cable (15 m): 1
Remote control unit strap: 1
Operating equipments:
Video signal input module : ET-MD95VM2
NTSC, NTSC4.43, PAL, SECAM, PAL-M, PAL60, PAL-N): ET-MD95SD1
Serial digital input module (480i/576i): ET-MD95SD2
Serial digital input module (480p/480i/576i): ET-MD95SD3
HD-serial digital input module (HD SDI): ET-MD95T
TMDs input module: ET-MD95T
Projection zoom lenses: ET-D95LE1, ET-D95LE2, ET-D95LE3
Projection fixed focal lens: ET-D95LE9
Replacement lamp unit: ET-LAD8500
Ceiling mount bracket: ET-PKD95
Dual stacking mount bracket: ET-DFD95

• Design and specifications are subject to change without notice.
• Weight and dimensions shown are approximate.

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WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.


Panasonic

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For USA

IMPORTANT SAFETY NOTICE

There are special parts used in Panasonic DLP™ based Projectors which are important for safety. These parts are marked  on the interconnection diagram. It is essential that these critical parts should be replaced with manufacturer's specified parts to prevent shock, fire, or other hazards. Do not modify the original design without permission of PANASONIC BROADCAST & TELEVISION SYSTEMS COMPANY.

Caution: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

FCC Warning: To assure continued FCC emission limit compliance, use only the provided grounded power supply cord and shielded interface cable with ferrite core when connecting this device to a computer. Also, any unauthorized changes or modifications to this equipment would void the users authority to operate this device.

Note: This DLP™ based Projector may only be used in a commercial, business or industrial environment.

1. Safety Precautions

1.1. General Guidelines

- **For continued safety, no modification of any circuit must be attempted.**
- **Unplug the power cord from the power outlet before disassembling this projector.**
- **It is advisable to use an isolation transformer in the AC power line before the service.**
- **Observe the original lead dress during the service. If a short circuit is found, replace all the parts overheated or damaged by the short circuit.**
- **After the service, all the protective devices such as insulation barriers, insulation papers, shields, and isolation R-C combinations must be properly installed.**
- **After the service, check the leakage current to prevent the customer from getting an electric shock.**

1.2. Leakage Current Check

1. Prepare the measuring circuit as shown in Fig.1.
Be sure to use a voltmeter having the performance described in Table 1.

Fig. 1

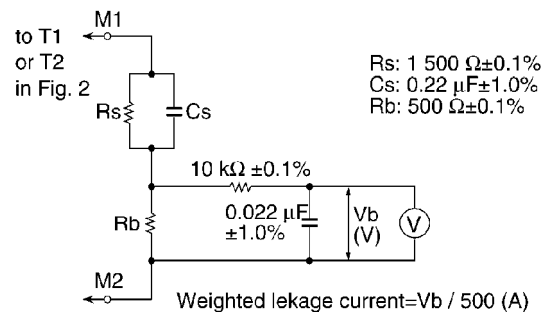
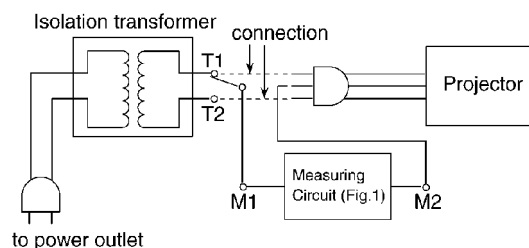


Table 1

	Performance
Voltmeter (rms reading)	Accuracy: $\leq 2\%$
	Input resistance: $\geq 1 \text{ M}\Omega$
	Input capacitance: $\leq 200 \text{ pF}$
	Frequency range: 15 Hz to 1 MHz

2. Assemble the circuit as shown in Fig. 2. Plug the power cord in a power outlet.

Fig. 2

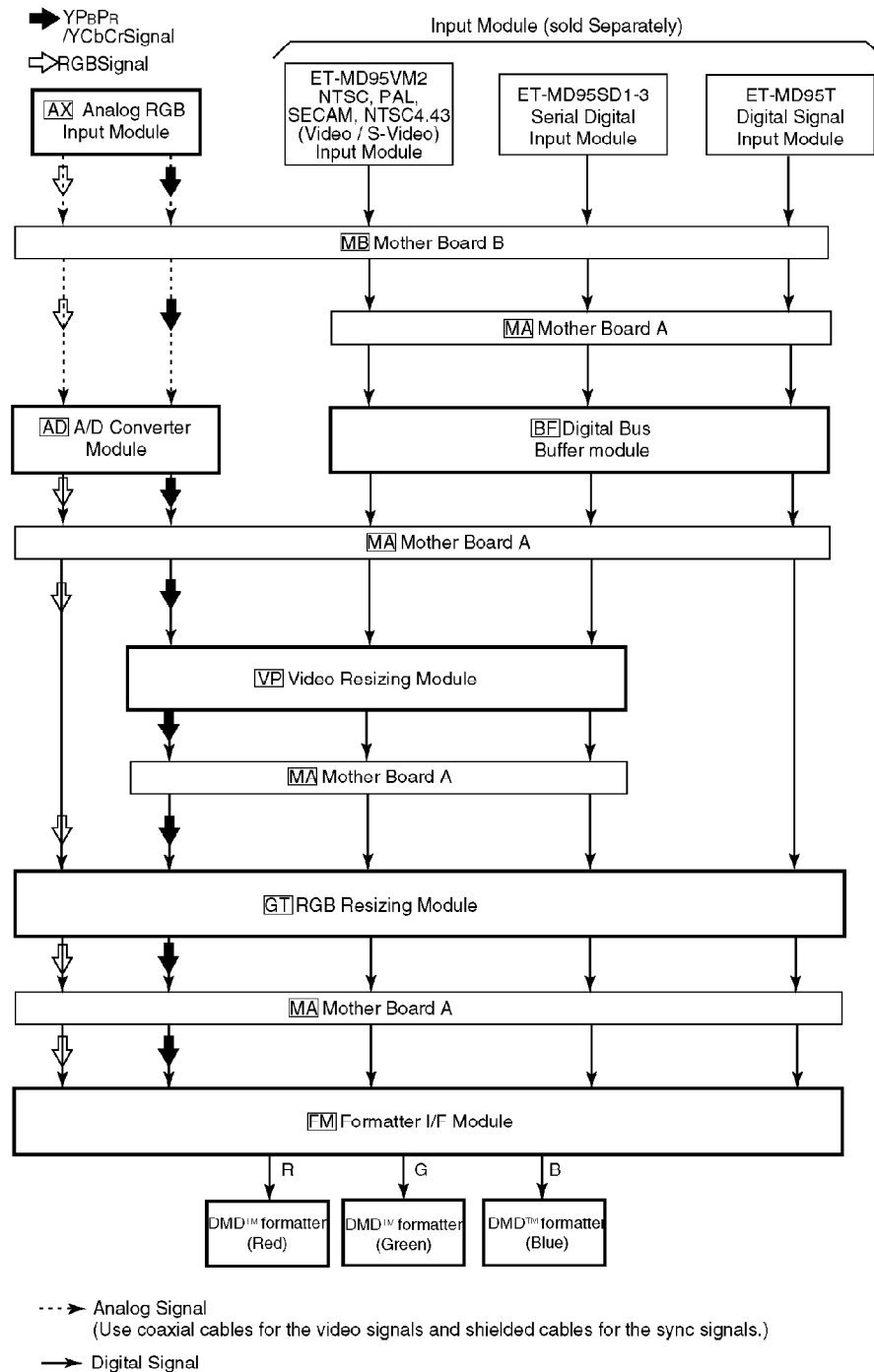


3. Connect M1 to T1 according to Fig. 2 and measure the voltage.
4. Change the connection of M1 from T1 to T2 and measure the voltage again.
5. The voltmeter must read 0.375 V or lower in both of steps 3 and 4.
This means that the current must be 0.75 mA or less.
6. If the reading is out of the above standard, the projector must be repaired and rechecked before returning to the customer because of a possibility of an electric shock.

2. Operating Instructions

3. Signal System diagram

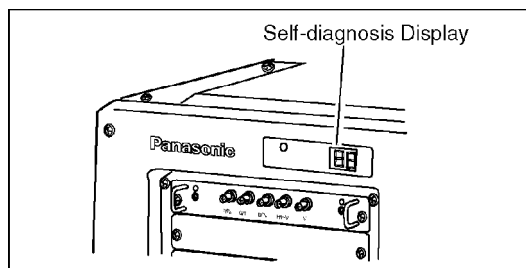
The projector employs a single RGB/YPBPR input. NTSC, NTSC4.43, PAL, SECAM, PAL-M, PAL60, PAL-N (video/S-video) signals, serial digital (480i, 576i) signals, and PC digital signals can be input by inserting separately sold input modules.



4. Self-Check Function

This projector has a self-check function indicating information by a two-digit code when an abnormal condition occurs. (Refer to the illustration at right.) When a malfunction occurs, this

function can be used to narrow down the modules or parts to be checked while referring to the table below.



Codes, Abnormal Contents, and Modules or Parts to be mainly checked

Codes	Items	Abnormal Contents	Modules or Parts to be mainly checked
AC	AC IN ERROR	Abnormally low AC voltage	①KA module, ②LF module, ③CM module
BE	BALLAST ERROR	Ballast power supply malfunction	①Lamp unit, ②Ballast power supply module, ③LF module
CE	TEMPERATURE ERROR	DMD™ temperature abnormality	①Each fan, ②FM module, ③DMD™ Assembly
EP	EEPROM ERROR	EEPROM abnormality	①CM module
FE	FAN STOP	Fan stop	①Each fan, ②LF module
FL	FLASH ERROR	FLASH ROM abnormality	①CM module
Ar	AR ERROR	RGB input slot abnormality	①AX module, ②CM module
IS	IC ERROR5	AD and VP modules abnormality	①AD module, ②VP module, ③CM module
IE	IC ERROR6	Format abnormality	①FM module, ②CM module, ③DMD™ Assembly
I7	IC ERROR7	Power supply, NR, LF, and SC modules abnormality	①KA module, ②NR module, ③LF module, ④SC module, ⑤CM module
I8	IC ERROR8	GT module abnormality	①GT module, ②CM module
Lb	LOW B STATE	LOW power supply malfunction	①Alpha power supply, ②PR module, ③LF module
LS	LAMP STATE	LAMP abnormality (lit up)	①Lamp unit, ②Ballast unit, ③LF module
OP	FAIL SAFE	Open cabinet, open duct	①Removal detecting switch for top-rear cabinet, ②Removal detecting switch for duct, ③LF module
rA	RAM ERROR	RAM abnormality	①CM module
SE	SHUTTER ERROR	Mechanical shutter malfunction	①LF module, ②Mechanical shutter block

※1: When the code "CE" appears, check that the ambient temperature of the projector is within its specification for this model.

:Turnign on the power at an ambient temperature of about 0 °C may require a warm-up time of approximately five minutes to start projecting a picture, During this warm-up,the code "CE", will appear on the self diagnosisdisplay. After the warm-up, the self -diagnosis display will turn off and the projector will project a picture. The POWER button on the remote control unit may be disabled during the operation of the self-diagnosis display. In this case, turn off theMAIN POWER switch, then turn it on again, and then press the POWER button on the remote control unit to turn on the projector.

Even if there is no problem,the codes below may appear. As mentioned on the previous page, turning on the power at an ambient temperature of about 0 °C may require a warm-up time of approximately five minutes to start projecting a picture.During this warm-up, the code "CE" will appear on the self-diagnosis display. In this case,note that there is no problem.

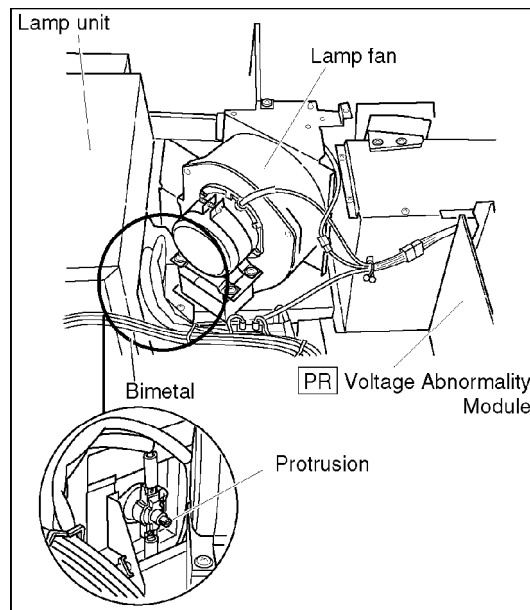
Codes	Items	Contents
※2 FC	FAN COOLING	Cooling mode at power off

※2: The lamp cooling fan will continue to operate for approximately five minutes after turning off the power. At the same time, the self-diagnosis display "FC" will blink.

5. Function for Safety

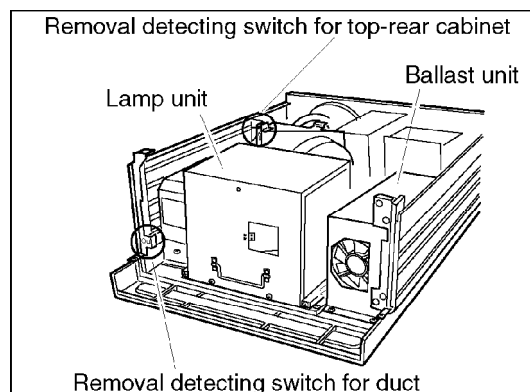
5.1. Temperature Cetection inside the Lamp Unit

This projector has the bimetal contacting the lamp unit to protectothe lamp.if the temperature of the lamp unit exceeds 100 °C, the bimetal will operate to turn off the power. (standby condition) The installd position of the bimetal isshown in the illustration at right.



5.2. Interlock Switch

To ensure safety, this projector is designed so that the power cannot be turned on without the top-rear cabinet or duct or under their imperfect installation. If removing the top-rear cabinet during the operation of the projector, the power will be turned off.



6. Service Mode

when setting the items below, set this projector to the serviceman mode.

	Items	Contents
OPTION	LAMP RUNTIME	Clears the lamp runtime after replacing the lamp. Refer to page 45.
	CUT OFF-R,G,B	Cuts off each color of R, G, and B.
	ENTRY SIGNAL CLEAR	Clears all the registered signals.
SPECIAL	LAMP ON MODE	Selecting the lamp power up function. NORMAL: Power up function will be NORMAL when the power is turned on. LAST: Power up function will be last mode which set on LAMP POWER of OPTION MENU when the power is turned on.
	REMOTE1 MODE	Switches the control mode of pin 8 of the REMOTE 1 terminal. (For "1", refer to the section "Using REMOTE IN 1 Terminal" in the Operating Instructions. "2" has the same function as the PIC MUTE button on the remote control unit.)
MENU	Special Mode Screen	
	<div>SPECIAL CUT OFF-R,G,B LAMP ON MODE REMOTE1 MODE MENU SUB MENU (ENTER)</div>	
	<div>Mode 0 Screen REMOTE1 MODE MODE 0 PIN8 0: OFF 1: ON 2: AUTO 3: REMOTE1 4: REMOTE2 5: REMOTE3 6: REMOTE4 7: REMOTE5 8: REMOTE6 9: REMOTE7 10: REMOTE8 11: REMOTE9 12: REMOTE10 13: REMOTE11 14: REMOTE12 15: REMOTE13 16: REMOTE14 17: REMOTE15 18: REMOTE16 19: REMOTE17 20: REMOTE18 21: REMOTE19 22: REMOTE20 23: REMOTE21 24: REMOTE22 25: REMOTE23 26: REMOTE24 27: REMOTE25 28: REMOTE26 29: REMOTE27 30: REMOTE28 31: REMOTE29 32: REMOTE30 33: REMOTE31 34: REMOTE32 35: REMOTE33 36: REMOTE34 37: REMOTE35 38: REMOTE36 39: REMOTE37 40: REMOTE38 41: REMOTE39 42: REMOTE40 43: REMOTE41 44: REMOTE42 45: REMOTE43 46: REMOTE44 47: REMOTE45 48: REMOTE46 49: REMOTE47 50: REMOTE48 51: REMOTE49 52: REMOTE50 53: REMOTE51 54: REMOTE52 55: REMOTE53 56: REMOTE54 57: REMOTE55 58: REMOTE56 59: REMOTE57 60: REMOTE58 61: REMOTE59 62: REMOTE60 63: REMOTE61 64: REMOTE62 65: REMOTE63 66: REMOTE64 67: REMOTE65 68: REMOTE66 69: REMOTE67 70: REMOTE68 71: REMOTE69 72: REMOTE70 73: REMOTE71 74: REMOTE72 75: REMOTE73 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Setting to Serviceman Mode

(1) Press the MENU button.

-the MENU screen will be displayed as shown in Fig. 1 at right.

(2) Select OPTION, using the UP (▲) and DOWN (▼) arrow buttons.

(3) Press the ENTER button.

-The OPTION screen will be displayed as shown in Fig. 2 at right.

(4) Select PASSWORD, using the UP (▲) and DOWN (▼) arrow buttons.

(5) Press the ENTER button.

-The PASSWORD screen will be displayed as shown in Fig. 3 at right.

(6) Input the password "1565", using the numeric buttons (0-9) on the remote control unit.

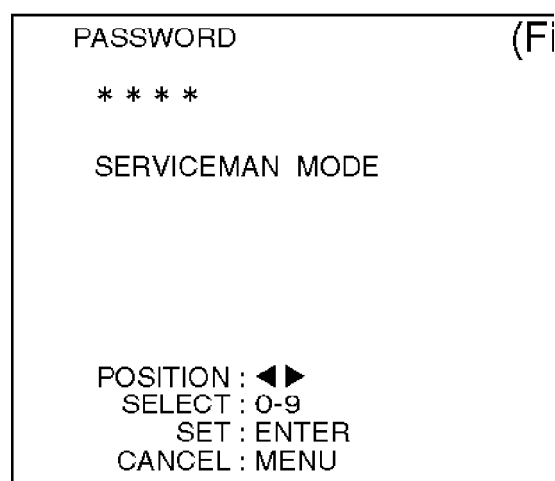
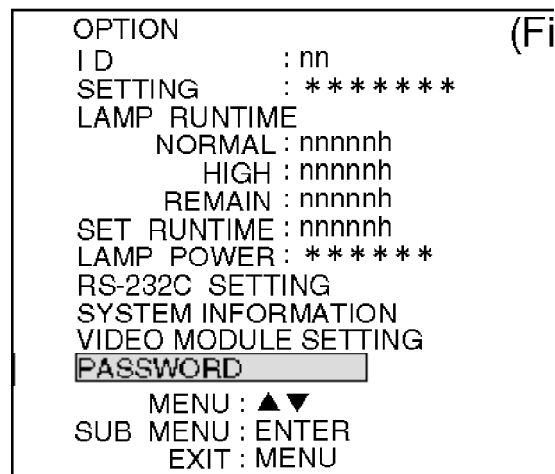
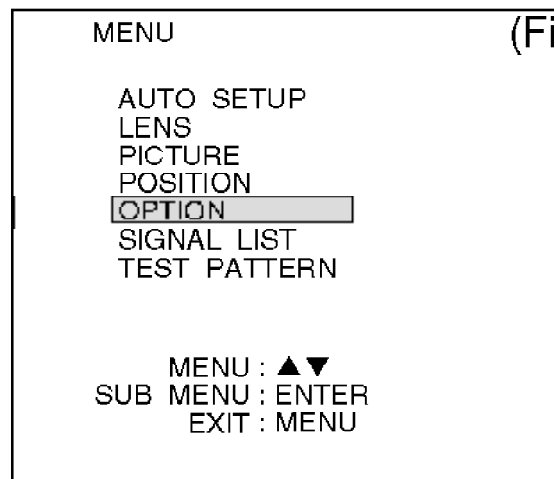
(7) Press the ENTER button.

-The word "SERVICEMAN MODE " will be displayed and the screen will return to the OPTION screen.

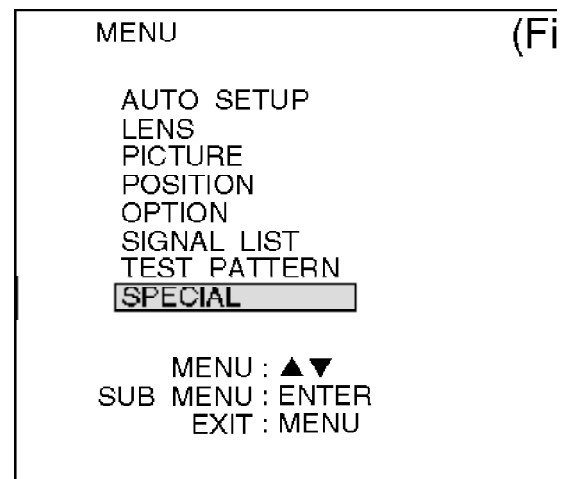
The differences between the serviceman mode and the normal mode are described below.

MENU screen:

The word "SPECIAL" is not displayed at the normal mode, but it displayed and can be selected at the serviceman mode.



- (8) To change from the OPTION screen to the SPECIAL mode, press the MENU button to return to the MENU screen, then select SPECIAL using the UP (▲) and DOWN (▼) arrow buttons, and then press the ENTER button.
- (9) To cancel the serviceman mode, press the POWER button on the remote control unit or the projector operating panel to set the projector to the standby mode.



7. Cautions for Service

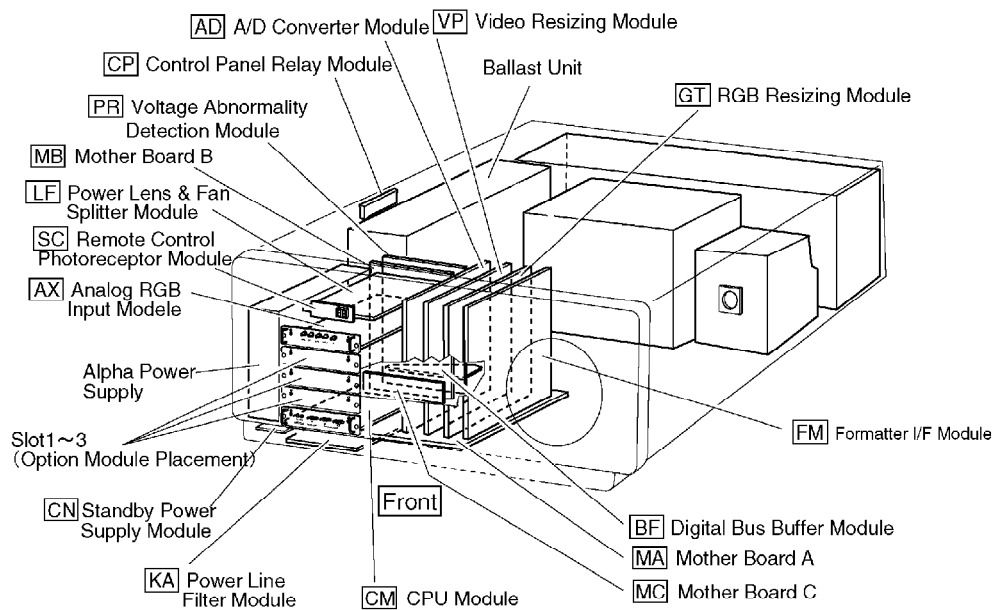
- During the operation of the cooling fan, do not unplug the power cord from the outlet and avoid a cutoff in the power lines such as the open of a circuit breaker.
- When turning off the projector, press the POWER button on the remote control unit or the projector operating panel (The POWER indicator becomes red.) and wait for about five minutes until the cooling fan stops.
- After making sure that the cooling fan stops, turn off the MAIN POWER switch on the front of the projector.

Warning:

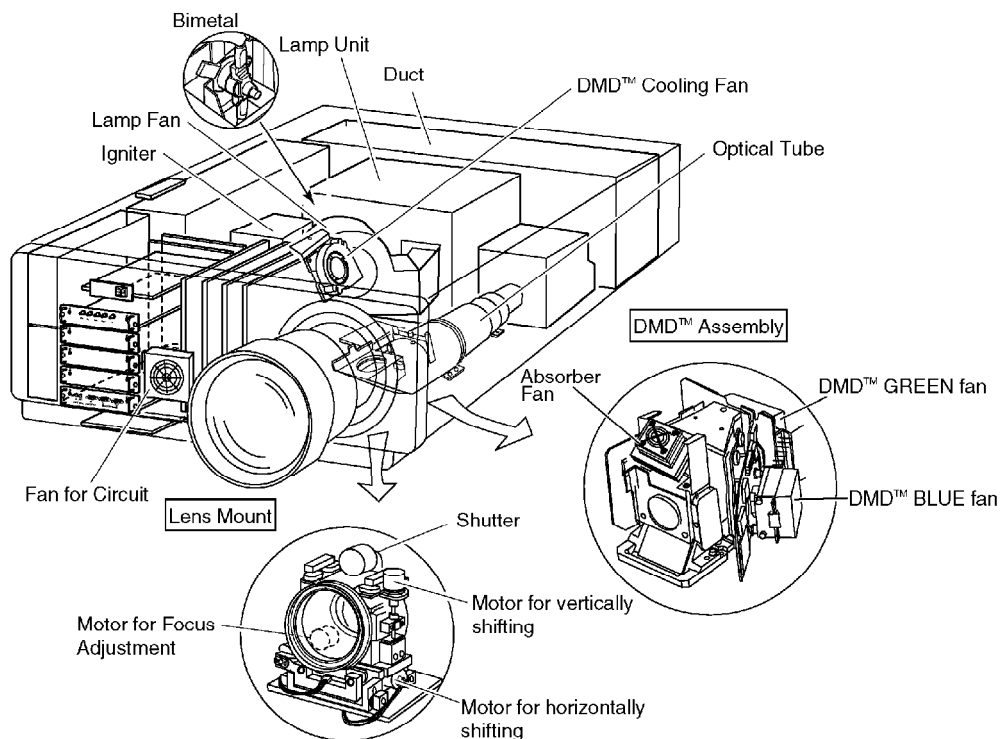
- Because this projector projects extremely strong light, never peep the lens tube to prevent the damage of your eyes.

8. parts Location

8.1. Parts Location



8.2. Location of Fan and Optical System



9. Lamp Unit Replacement

Important Points to keep in mind

When replacing the lamp unit with a new one, pay attention to the following points.

Warning:

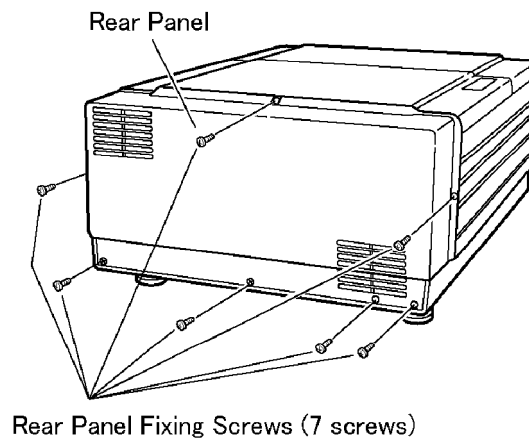
- Because the temperature of the lamp unit is elevated immediately after its use, a direct touch to it may cause burns. After the lamp has cooled enough, replace the lamp unit.

Cautions for Lamp Unit Replacement:

- Handle the removed old lamp unit carefully. If abusing it, it may have a risk of explosion.
 - Wear gloves when replacing the lamp unit.
 - When replacing the lamp unit becomes necessary during the operation of the projector, follow the procedure below to turn off the power and wait until the lamp unit cools completely.
1. Press the POWER button on the remote control unit or the projector operating panel to turn off the power.
 2. Wait for about five minutes until the cooling fan stops.
 - * The lamp cooling fan will continue to operate for about five minutes after turning off the power. During the operation of the cooling fan, do not unplug the power cord from the outlet and avoid a cutoff in the power lines such as the open of a circuit breaker.
 3. After making sure that the cooling fan stops, turn off the MAIN POWER switch on the front of the projector
 4. Unplug the power cord from the outlet.

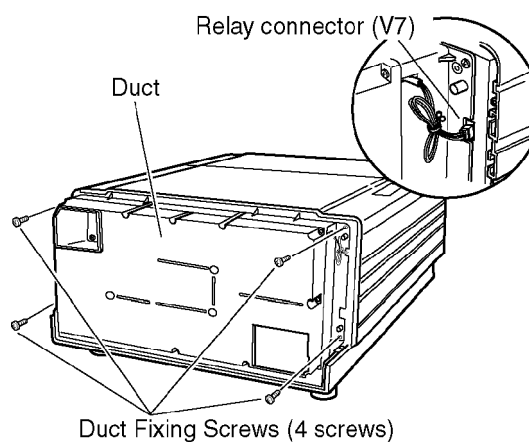
9.1. Replacement Procedure

1. Remove the rear panel, unscrewing the seven screws fixing it.



2. Disconnect relay connector V7 of the duct fan motor.

3. Remove the duct, unscrewing the four screws(black) fixing it.

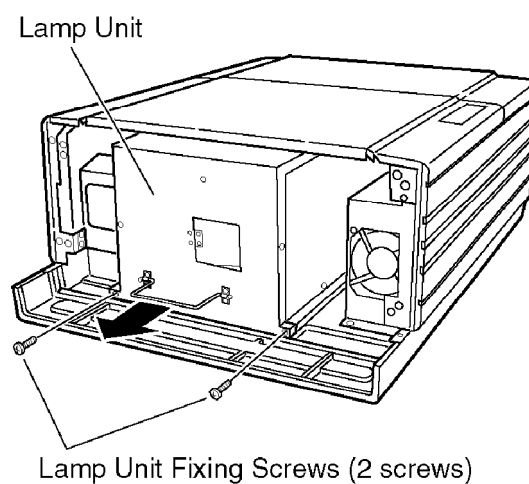


4. Unscrew the two screws fixing the lamp unit.

5. Check that the lamp unit and its region cool completely.

Warning:

- Because the temperature of the lamp unit is elevated immediately after its use, a direct touch to it may cause burns.

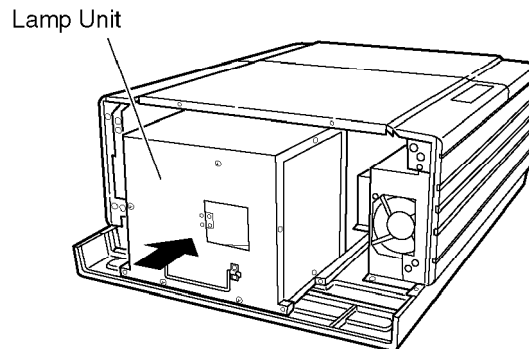


6. Pull out the lamp unit slowly by its handle.

- Do not touch the glass surface of the lamp unit.

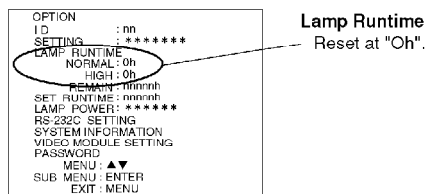
7. Install a new lamp unit, following steps 1 through 6 in reverse.

- Do not sandwich the wires and others when installing the lamp unit, duct, and rear panel.



After replacing the lamp unit with a new one, be sure to reset the lamp runtime of the projector at "0h". If not resetting the lamp runtime, even the projector with the new lamp will shut down about ten minutes after turning on the power.

On-screen Display

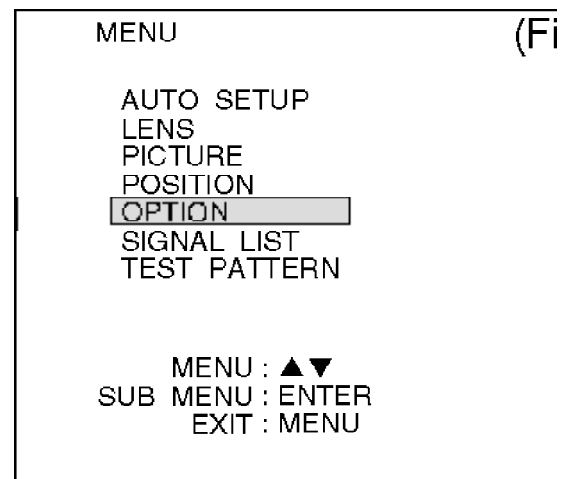


The resetting procedure of the lamp runtime is described on the next page.

9.2. Resetting Procedure of Runtime

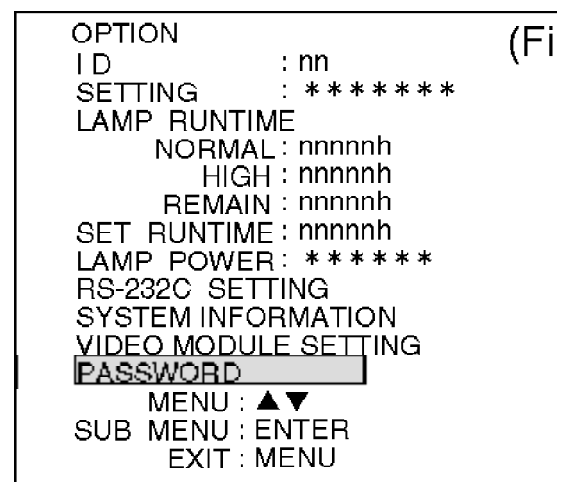
(1) Press the MENU button.

-The MENU screen will be displayed as shown in Fig. 6 at right.



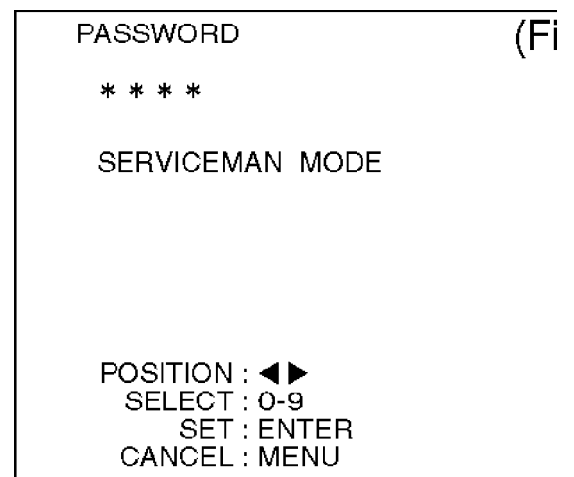
(2) Select OPTION and press the ENTER button.

-The OPTION screen will be displayed as shown in Fig. 7 at right.



(3) Select PASSWORD and press the ENTER button.

-The PASSWORD input screen will be displayed as shown in Fig. 8 at right.



- (4) Input the password “1565” using the numeric buttons (0-9) on the remote control unit, and press the ENTER button.

-The projector will be set to the serviceman mode.

-The screen will return to the OPTION screen as shown in Fig. 7 at right.

OPTION (Fig. 7)
I D : nn
SETTING : * * * * *
LAMP RUNTIME
NORMAL : nnnnnh
HIGH : nnnnnh
REMAIN : nnnnnh
SET RUNTIME : nnnnnh
LAMP POWER : * * * * *
RS-232C SETTING
SYSTEM INFORMATION
VIDEO MODULE SETTING
PASSWORD
MENU : ▲▼
RESET : ENTER
EXIT : MENU

- (5) Select LAMP RUNTIME and press the ENTER button.

-The RESET LAMP RUNTIME screen will be displayed as shown in Fig. 10 at right.

RESET LAMP RUNTIME? (Fig. 10)

YES : ENTER
NO : MENU

- (6) Press the ENTER button.

-The reset will be completed and the screen will return to the OPTION screen as shown in Fig. 11 at right.

NORMAL and HIGH of LAMP RUNTIME will be reset at “0h”.

- (7) Press the POWER button.

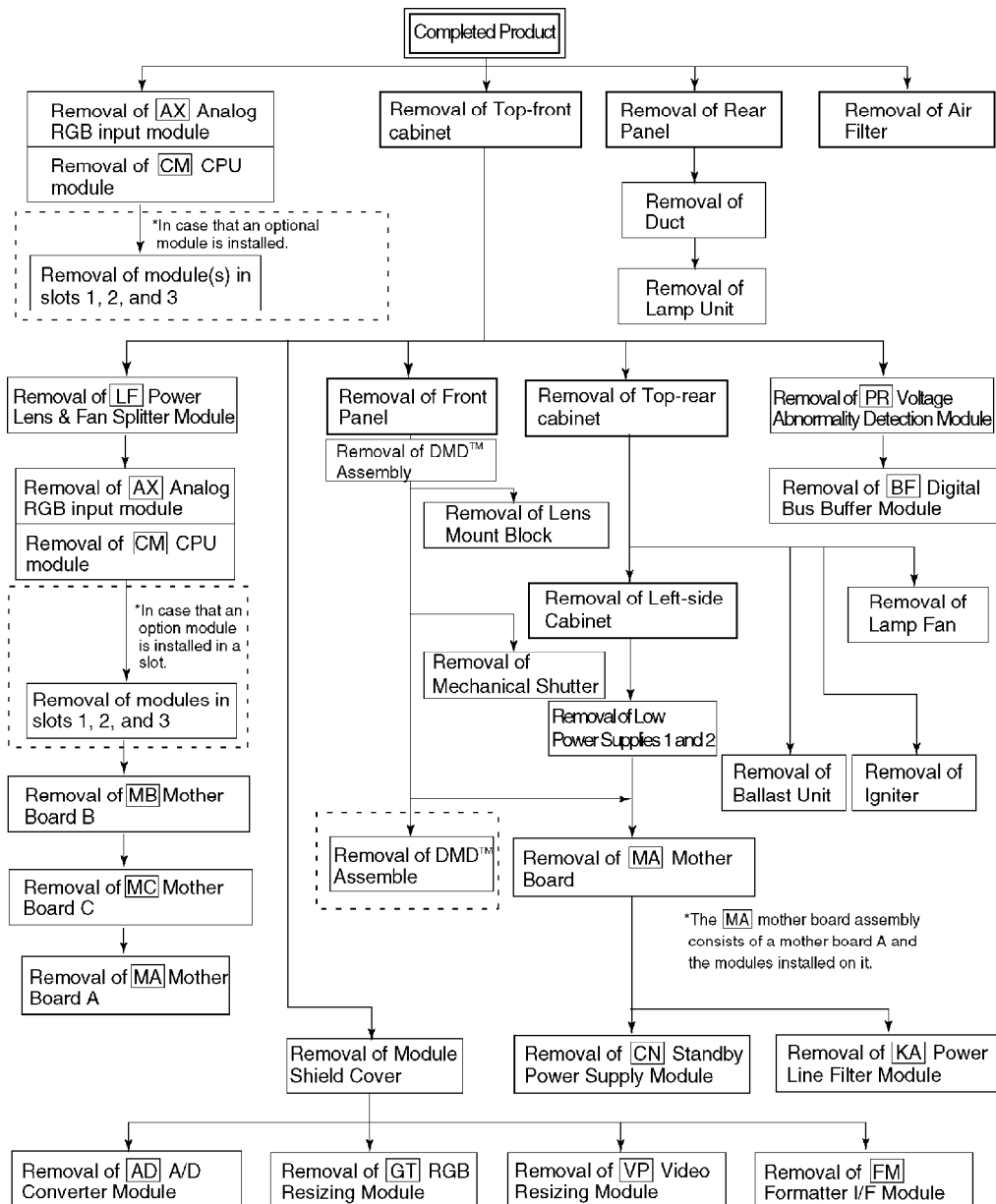
-The projector will be set to the standby mode and the serviceman mode will be canceled.

OPTION (Fig. 11)
I D : nn
SETTING : * * * * *
LAMP RUNTIME
NORMAL : 0h
HIGH : 0h
REMAIN : nnnnnh
SET RUNTIME : nnnnnh
LAMP POWER : * * * * *
RS-232C SETTING
SYSTEM INFORMATION
VIDEO MODULE SETTING
PASSWORD
MENU : ▲▼
SUB MENU : ENTER
EXIT : MENU

10. Disassembly Instructions

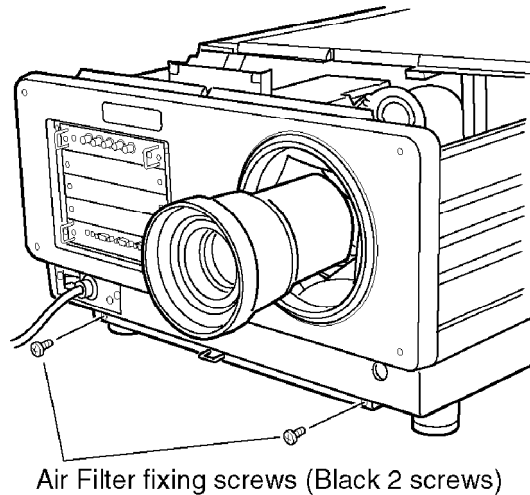
10.1. Disassembly Procedure

The flowchart below shows the disassembly procedure. For assembly, follow the disassembly procedure in reverse.



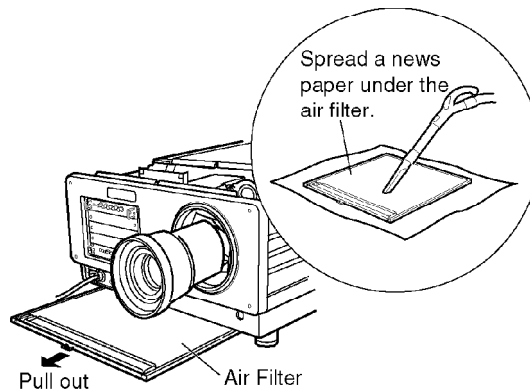
10.2. Air Filter Cleaning

1. Unscrew the two screws (black) fixing the air filter.



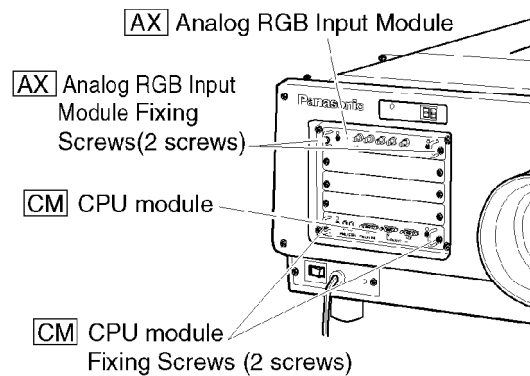
Air Filter fixing screws (Black 2 screws)

2. Pull straight out the air filter toward the front side.
3. Clean the air filter by the vacuum cleaner.

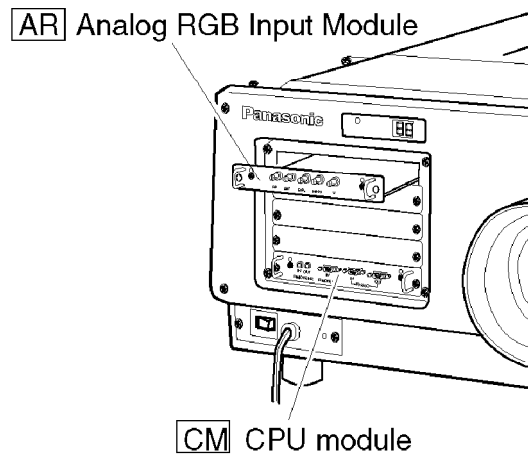


10.3. Removal of [AX] Analog RGB Module and [CM] CPU Module

1. Unscrew the screws (two screws per module) fixing the [AX] analog RGB input module and [CM] CPU module.

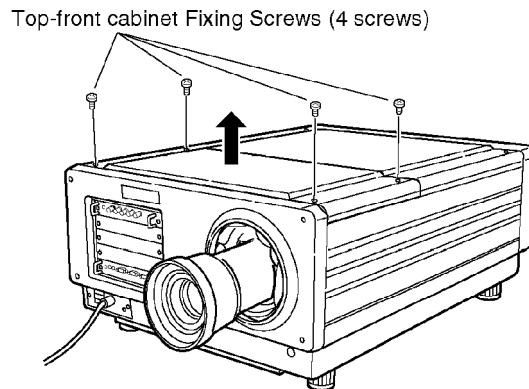


2. Pull straight out the [AX] analog RGB module and [CM] CPU module toward the front side.



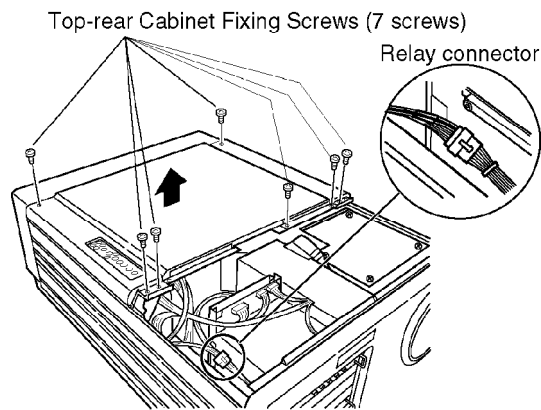
10.4. Removal of Top-front Cabinet

1. Remove the top-front cabinet, unscrewing the four screws (silver) fixing it.



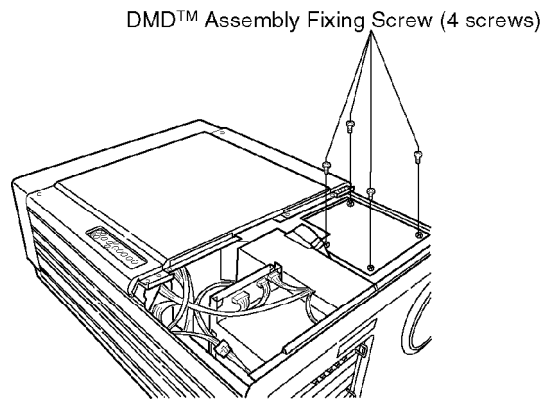
10.5. Removal of Top-rear Cabinet

1. Remove the top-front cabinet, referring to the section “Removal of Top-front Cabinet.
2. Disconnect the relay connector for operation switch.
3. Remove the top-rear cabinet, unscrewing the seven screws (silver) fixing it.



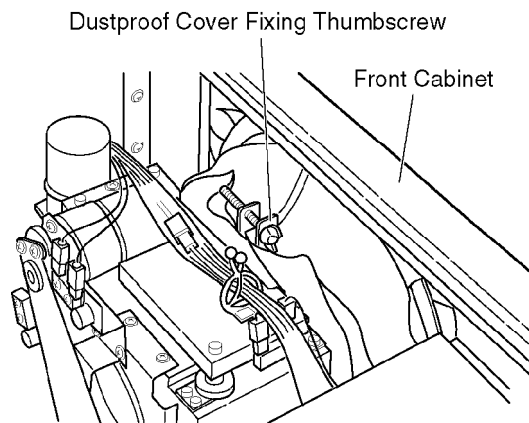
10.6. Removal of DMD Assembly Cover

1. Remove the DMD™ assembly cover, unscrewing the four screws fixing it.

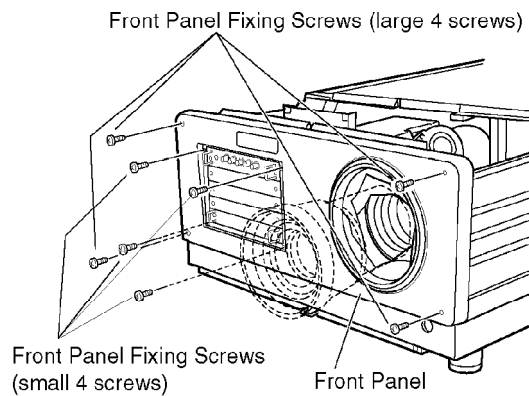


10.7. Removal of Front Panel

1. Remove the lens.
2. Remove the top-front cabinet, referring to the section “Removal of Top-front Cabinet”.
3. Remove the dustproof cover from the lens mount block in the cabinet, loosening the thumbscrew fixing the cover.

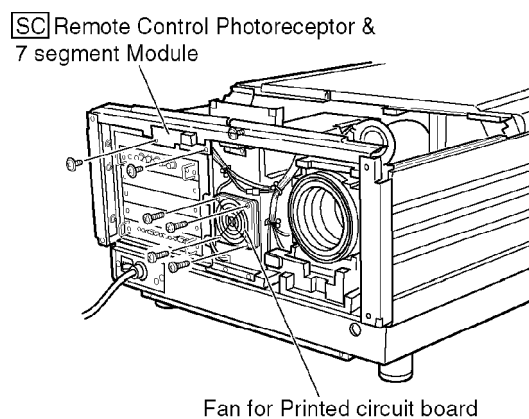


4. Remove the front panel, unscrewing the eight screws (large 4 screws, small 4 screws of silver).



Note:

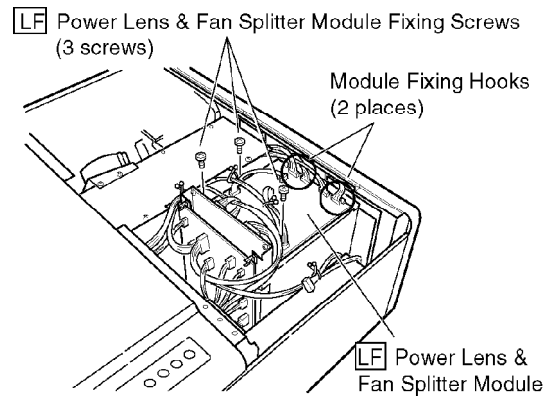
It is possible to Check the remote control photoreceptor module, and fan for printed circuit board.



10.8. Removal of [LF] Power Lens & Fan Splitter Module

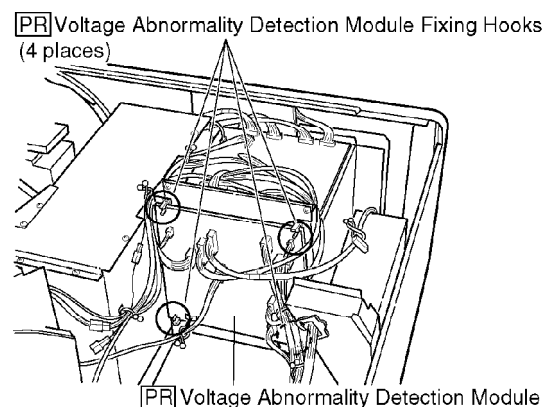
1. Remove the top-front cabinet, referring to the section “Removal of Top-front Cabinet”.

2. Disconnect all the connectors on the [LF] power lens & fan splitter module.
3. Remove the [LF] power lens & fan splitter module from the hooks (2 places), unscrewing the three screws fixing the module.



10.9. Removal of [PR] Voltage Abnormality Detection Module

1. Remove the top-front cabinet, referring to the section “Removal of Top-front Cabinet”.
2. Disconnect all the connectors on the [PR] voltage abnormality detection module.
3. Remove the [PR] voltage abnormality detection module from the hooks (4 places).



10.10. Removal of [BF] Digital Bus Buffer Module

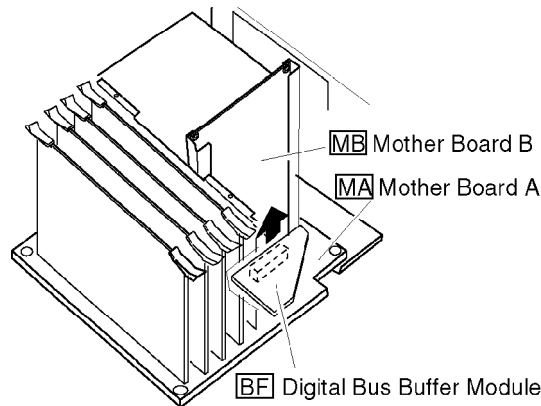
1. Remove the top-front cabinet, referring to the section “Removal of Top-front Cabinet”.
2. Remove the [PR] voltage abnormality detection module, referring to the section “Removal of [PR] Voltage Abnormality Detection

Module”.

3. Remove the [BF] digital bus buffer module from the [MA] mother board A.

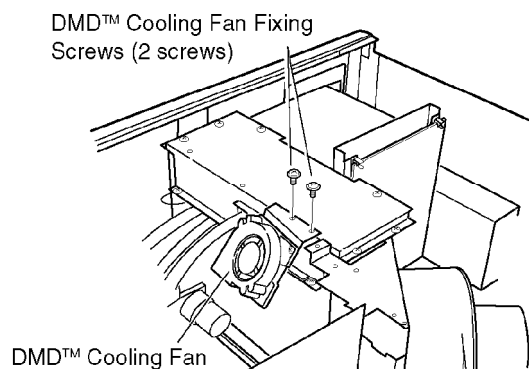
* The peripheral components are not shown in Fig. 8 so that the main components in this section can be seen easily.

Fig. 8



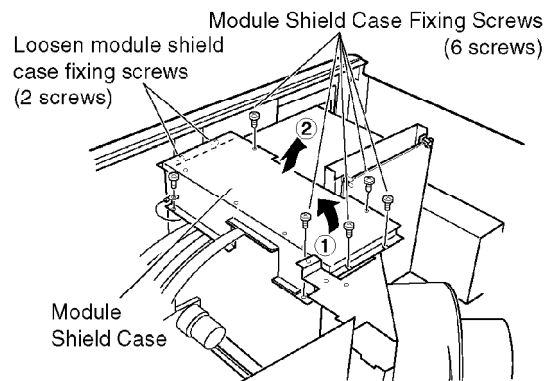
10.11. Removal of [AD] A/D Converter Module, [GT] RGB Resizing Module, and [FM] DMD Driver Module

1. Remove the top-front cabinet, referring to the section “Removal of Top-front Cabinet”.
2. Remove the DMD™ cooling fan, unscrewing the two screws fixing it.

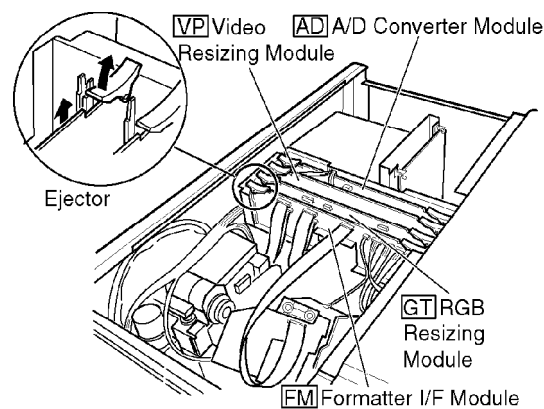


3. Remove the module shield case, loosen the two screws of front side and unscrewing the six screws fixing it.
- * The unscrewed screws are shown in Fig. 9 so that the positions of the fixing screws can be seen easily.

Fig. 9



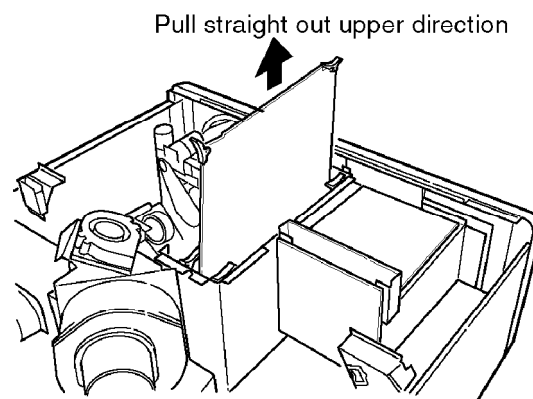
4. Release the modules by the ejectors on both sides of each module.



5. Pull straight out the module to be replaced upward.

*** When removing the [AD] A/D converter module, disconnect the three coaxial cables and one connector before the work.**

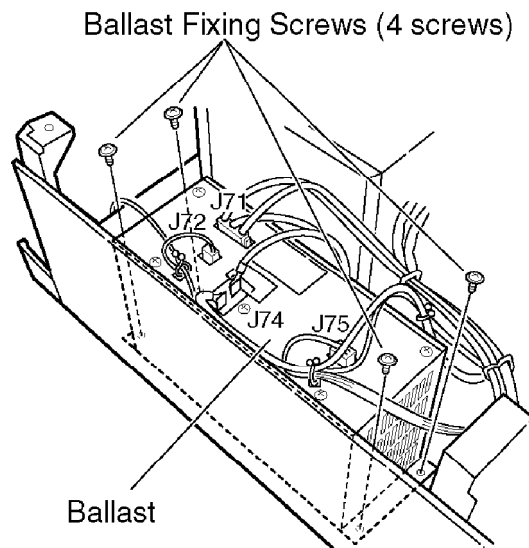
*** When removing the [FM] Formatter I/F module, disconnect the five flat cables and four connector before the work.**



10.12. Removal of Ballast

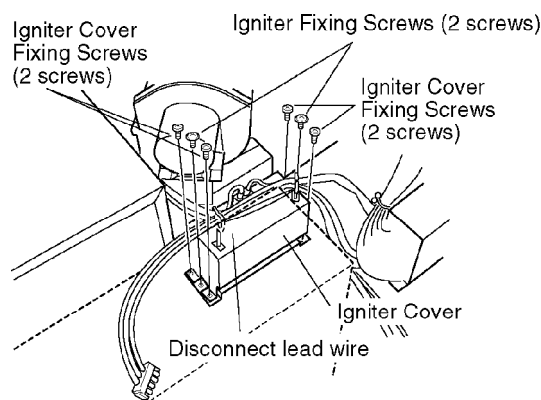
1. Remove the top-front cabinet, referring to the section “Removal of Top-front Cabinet”.

2. Remove the top-rear cabinet, referring to the section “Removal of Top-rear Cabinet”.
3. Disconnect connectors (J71, J72, J75) of ballast.
4. Disconnect lead wires J74 (+) and J74 (-).
5. Remove the ballast, unscrewing ballast fixing screws (4 screws).



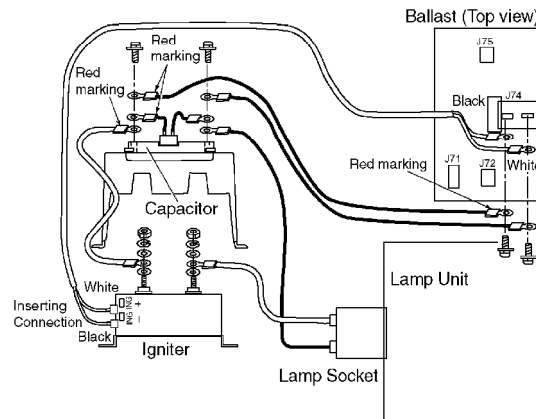
10.13. Removal of Igniter

1. Remove the Top-front cabinet, referring to the section “Removal of Top-front Cabinet”.
2. Remove the Top-rear cabinet, referring to the section “Removal of Top-rear Cabinet”.
3. Remove lead wire from clamber of igniter cover.
4. Remove the Igniter Cover, unscrewing the four screws fixing it.
5. Remove the Igniter, unscrewing the two screws fixing it.



Note:

When connecting the cables to the igniter (or ballast), refer to the illustration below and be sure to tighten the nuts and bolts.



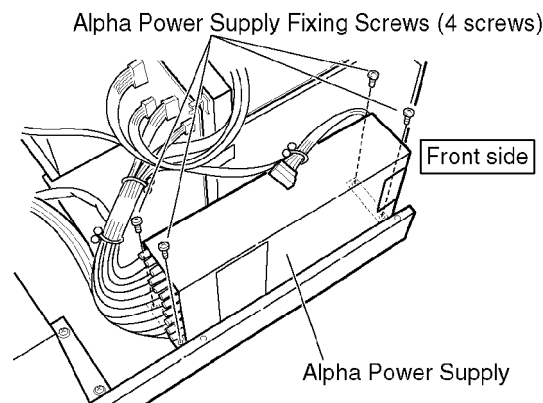
10.14. Removal of Alpha Power Supply

1. Remove the top-front cabinet, referring to the section “Removal of Top-front Cabinet”.
2. Remove the top-rear cabinet, referring to the section “Removal of Top-rear Cabinet”.
3. Remove four screws of the alpha power supply fixing screws.
4. Take the alpha power supply out upside and disconnect connectors of alpha power supply.

Note:

The figure shows the side cover removed.

However, the alpha power supply can be removed without removing the side cover.

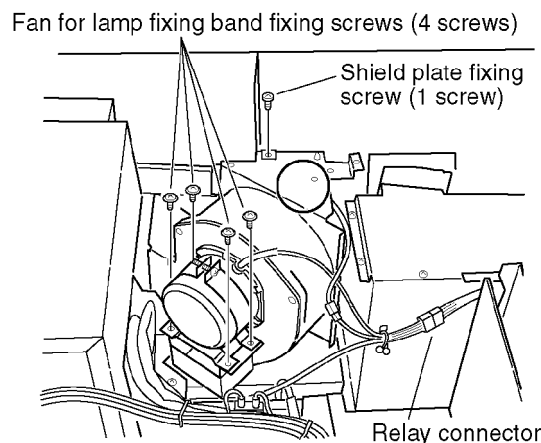


10.15. Removal of Fan Block for Lamp

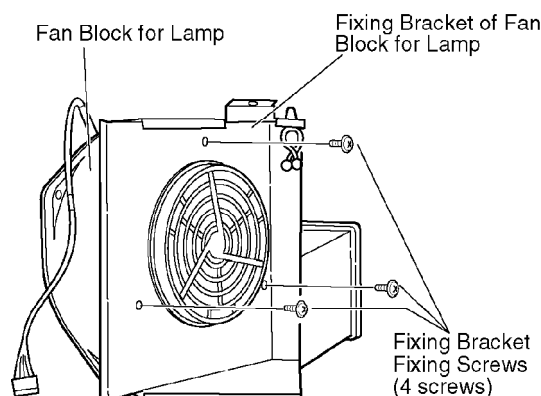
1. Remove the top-front cabinet, referring to the section “Removal of Top-front Cabinet”.
2. Remove the top-rear cabinet, referring to the section “Removal of Top-rear Cabinet”.
3. Disconnect the fan motor relay connector (F8).
4. Remove the fan block for lamp, unscrewing the four screws fan fixing band for lamp fixing screws and a screw shield plate fixing screw.

Note:

Remove the lead wires from clammer where is in back side of circle is shown in Figure (upper right).



5. Remove the fan block for lamp, unscrewing the three screws fan block for lamp fixing screws.



10.16. Removal of Mechanical Shutter Block

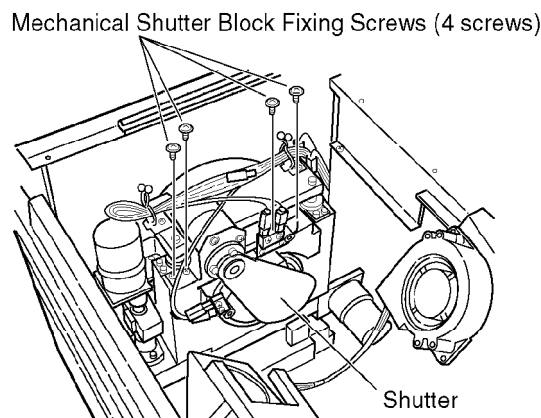
1. Remove the top-front cabinet, referring to the section “Removal

of Top-front Cabinet”.

2. Disconnect the connector of shutter position switch (2 places) and relay connector for mechanical shutter motor.
3. Remove the mechanical shutter block, unscrewing the four screws fixing it.

Note:

For reason of clarity, the figure shows the optical block removed.

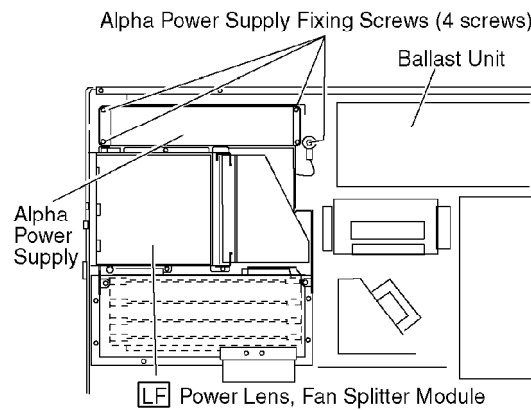


10.17. Removal of [KA] Power Line Filter Module and [CN] Standby Power Supply Module

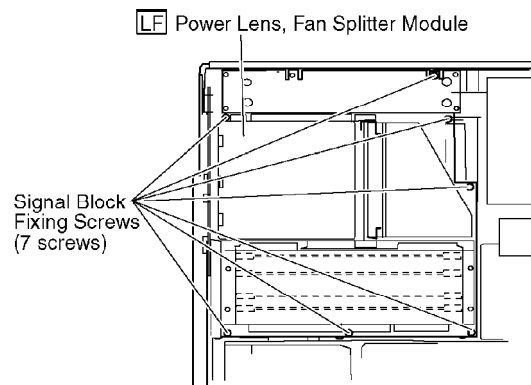
1. Remove the top-front cabinet, referring to the section “Removal of Top-front Cabinet”.
2. Remove the top-rear cabinet, referring to the power section “Removal of Top-rear Cabinet”.
3. Remove the alpha power supply, unscrewing the four screws fixing it.

Note:

After fitting, do not forget to insert the grounding plugs of the alpha power supply and signal block.

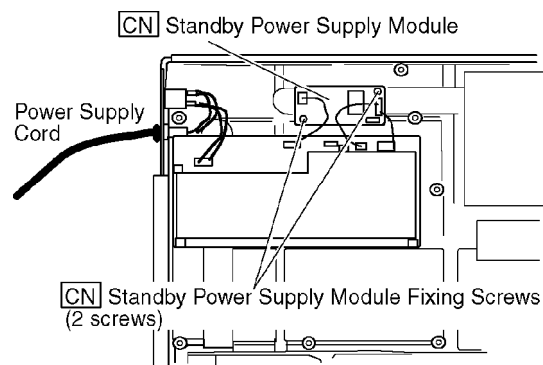


4. Remove the signal block (mother block), unscrewing the seven screws fixing it.



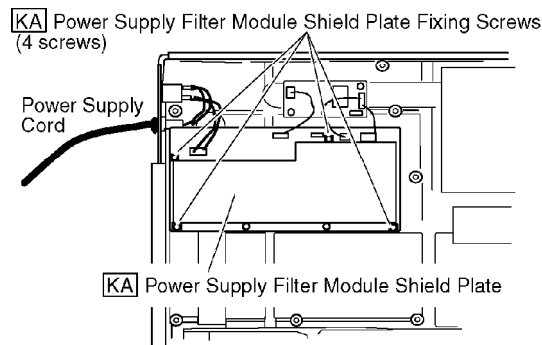
10.17.1. Removal of [CN] Standby Power Supply Module

1. Disconnect the connectors (CN1, CN2) of [CN] standby supply module.
2. Remove the standby power supply module, unscrewing the two screws fixing it.

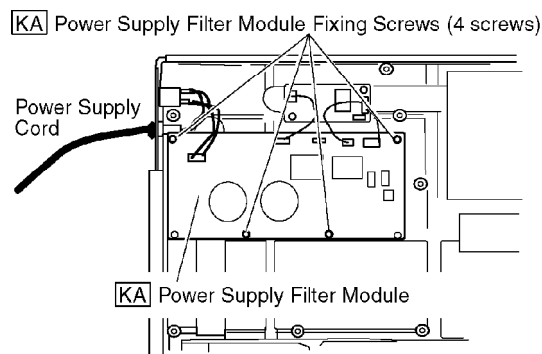


10.17.2. Removal of [KA] Power Supply Filter Module

1. Remove the shield plate of the power supply filter, unscrewing the four screws fixing it.

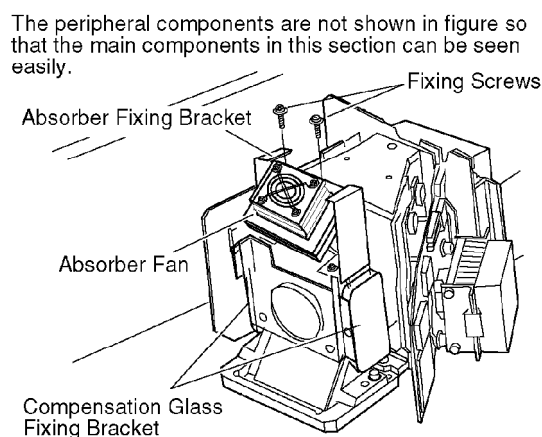


2. Disconnect the connectors (KA1, KA2, KA3, KA4, KA6, KA7, KA8, KA9, KA10) of the power supply filter module.
3. Remove the power supply filter module, unscrewing the four screws fixing it.

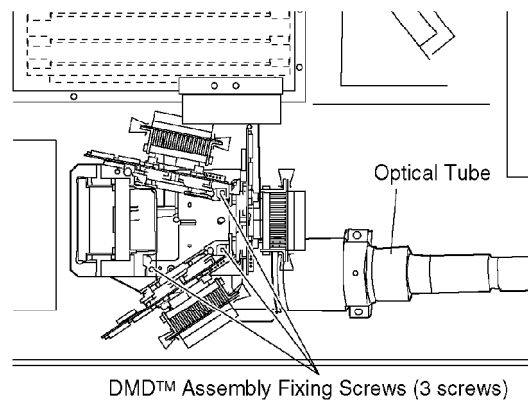


10.18. Removal of DMD Assembly

1. Remove the fan for absorber, unscrewing the two screws fixing it.
2. Remove the compensation glass fixing bracket, bracket for absorber and rubber for vibration proof.



3. Remove the DMD™ assembly block, unscrewing three screws fixing it.



11. Troubleshooting

11.1. Note for [CM] Module Replacement

Checking Procedure

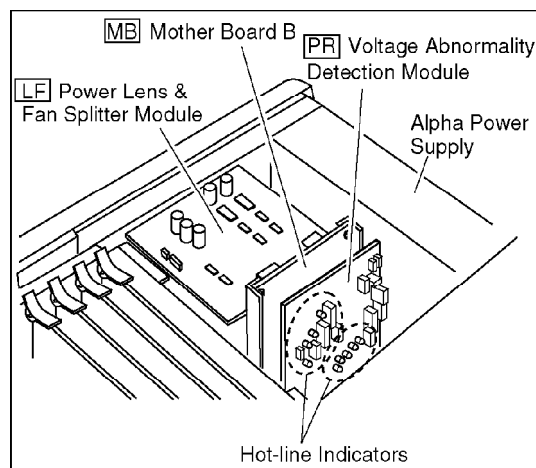
To check this projector, the self-check function can be used.

This chapter describes the excluded items from the self-check function.

Checking Procedure of Power Voltages

Some modules have hot-line indicators to check whether each power voltage is supplied or not. The voltages to be supplied are printed on their boards and these indicators show the conditions of the power lines.

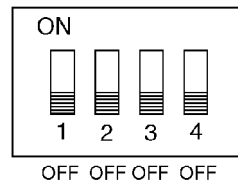
The illustration at right shows the positions of the hot-line indicators on the [PR] voltage abnormality detection module.



11.2. DIP Switches

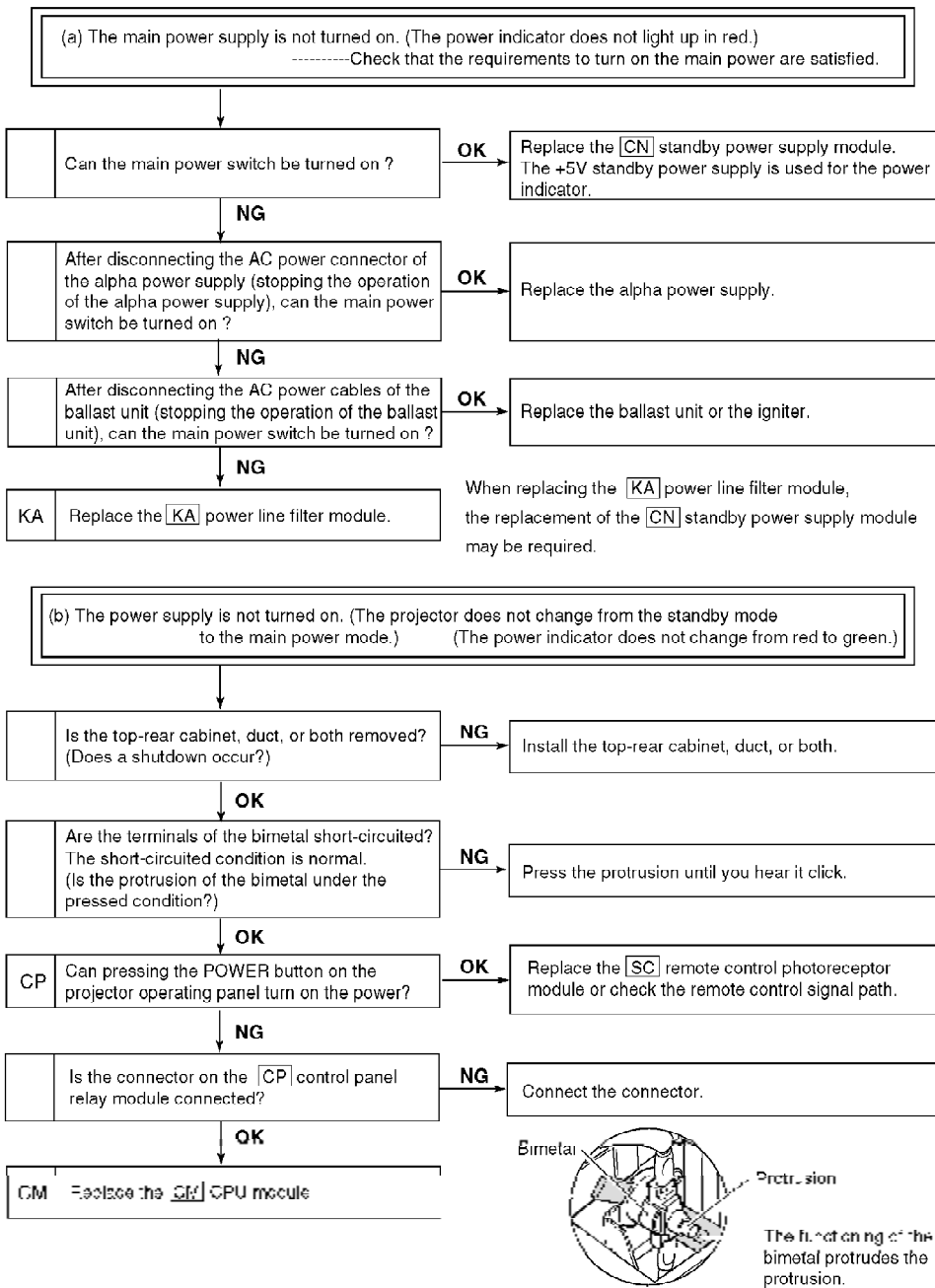
The [CM] CPU module have the DIP switches. When replacing these modules with new ones, check that the DIP switch settings of the new modules are as shown below (factory default settings).

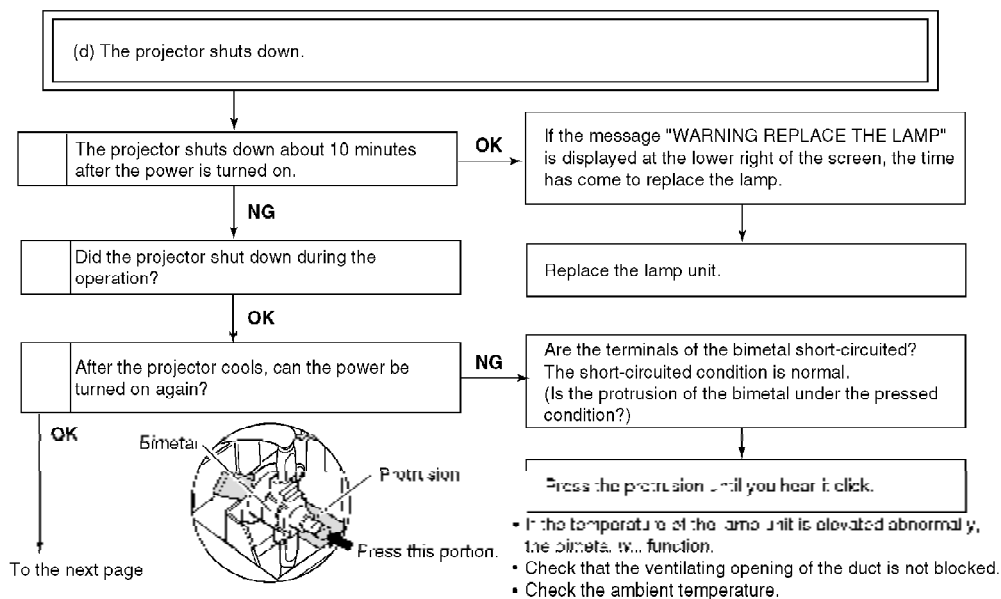
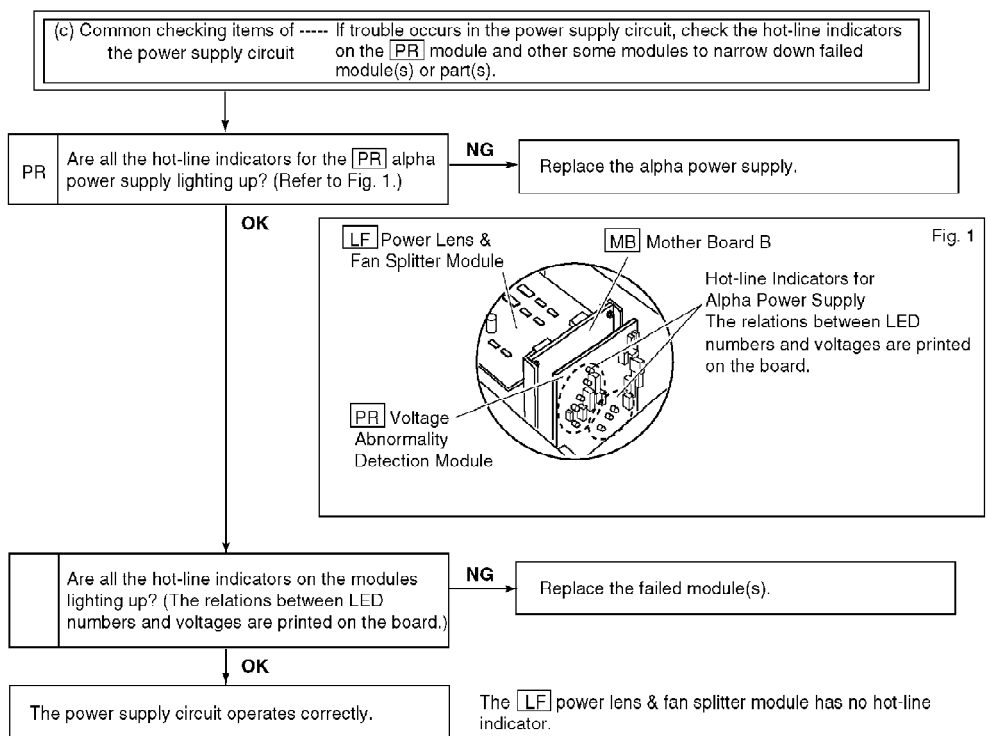
CM CPU Module



11.3. Troubleshooting

Perform the services of this projector, referring to the troubleshooting charts below and self-check function. The letters such as KA and PR at the left of each box show the modules related to the respective items.





From the previous page

If the code "CE" appears on the self-diagnosis display, a Peltier device or fan is at fault.

OK

Replace the DMD™ assembly.

When the code "CE" appears, check that the ambient temperature of the projector is within its specification for this model.

If the code "FE" appears on the self-diagnosis display, a fan motor stops.

• Table of Fan Voltage (Table 1)

Name (Purpose)	Connector	Terminal No.	Voltage	
Peltier Fan	LF9	1	+24V	
		2	GND	
		4	+24V	
		7	+24V	
Absorber Fan	LF12	1	+24V	
Prism Fan		2	GND	
		4	+24V	
Circuit Fan	LF13	1	+24V	
		2	GND	
Lamp Fan	LF16	1	+24V	
		3	GND	
Duct Fan	LF18	1	+24V	
		2	GND	

Check the fan voltages.
[PR] voltage abnormality detection module,
Are D9917 (24V) and D9918 (12V) lighting
up?

OK

Are the voltages of the [LF] power lens & the
fan terminals correct? (Refer to Table 1.)

OK

NG

NG

Replace the [LF] power lens & fan splitter
module.

Is D9917 (24V) lighting up?

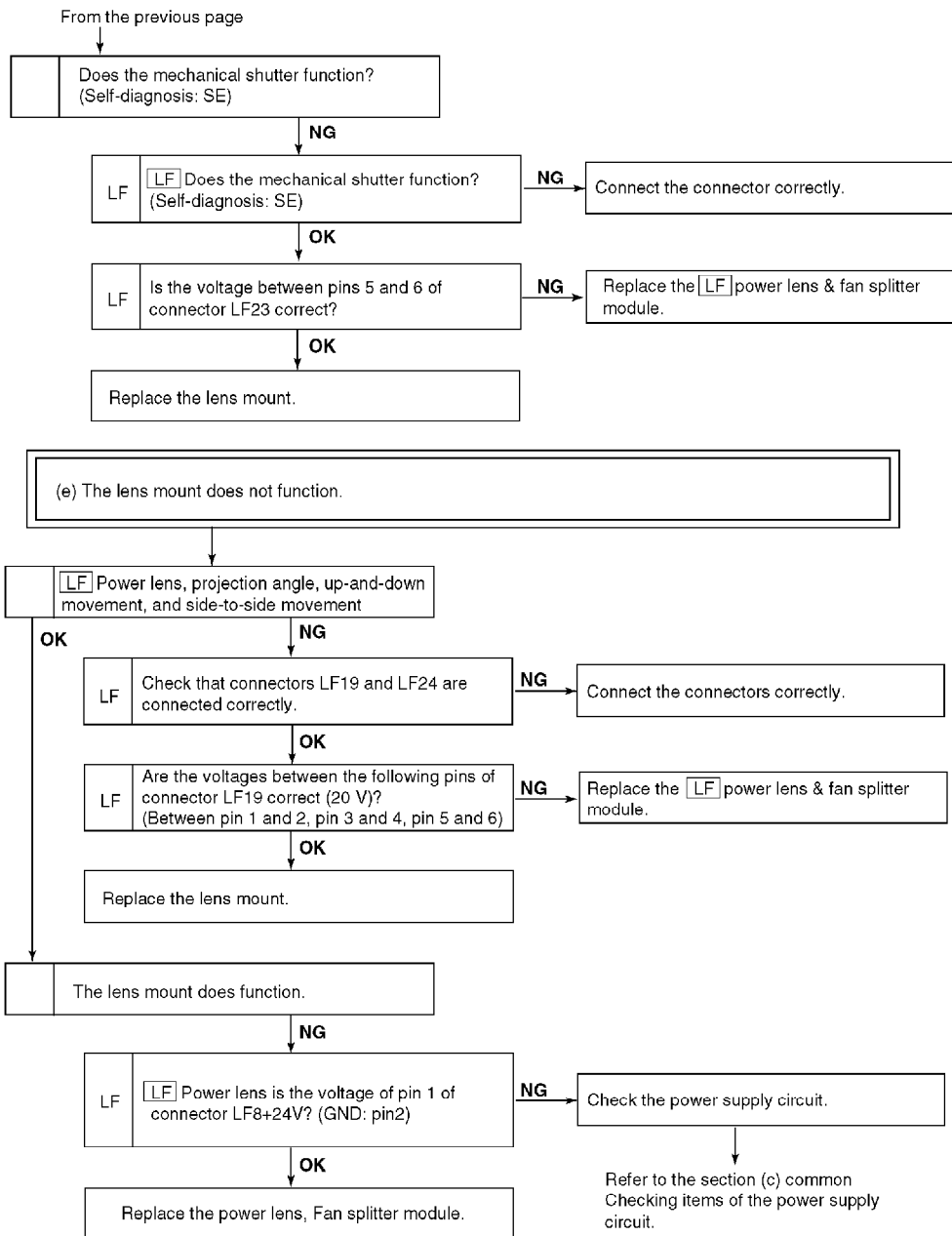
NG

Replace the alpha power supply.

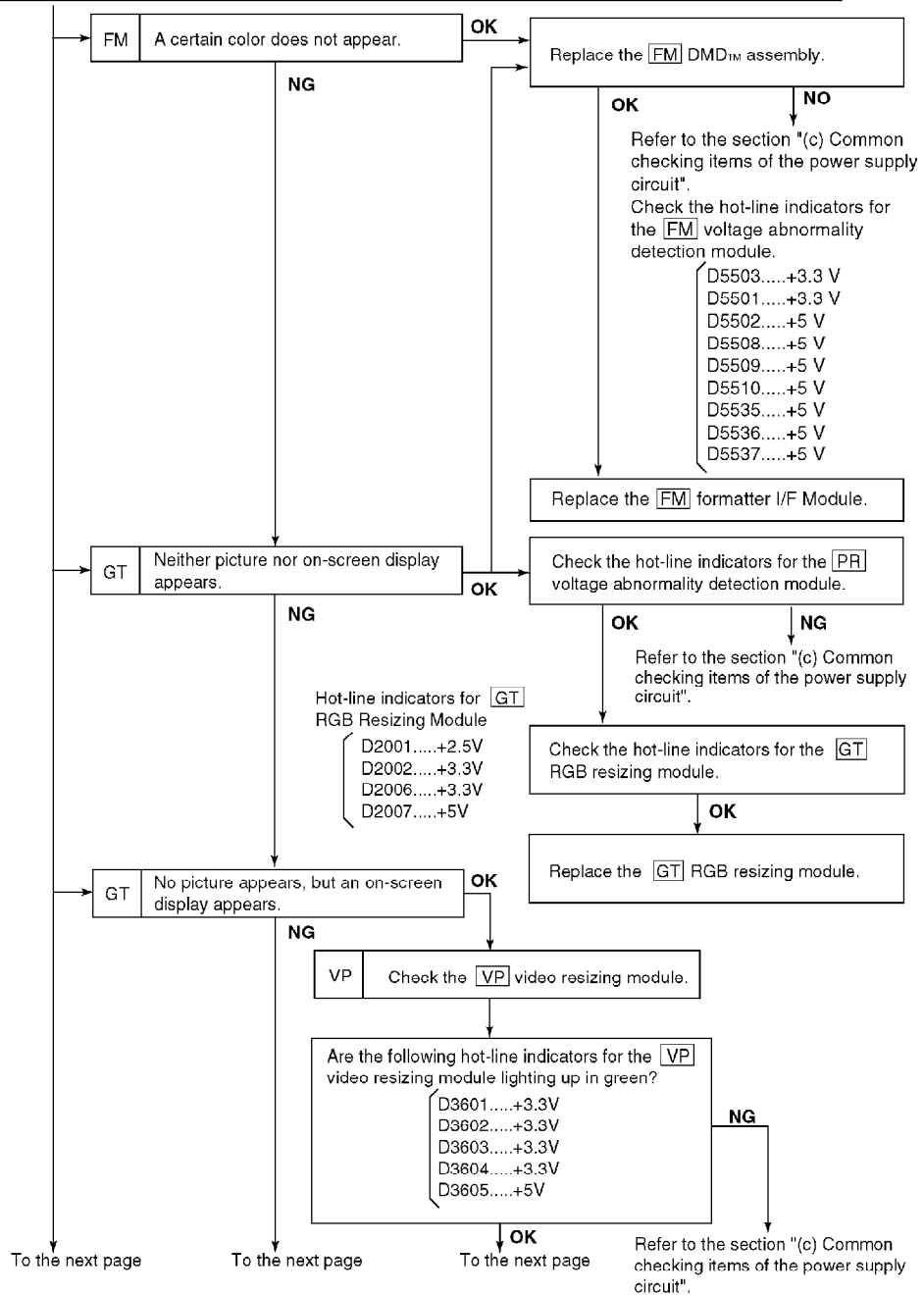
OK

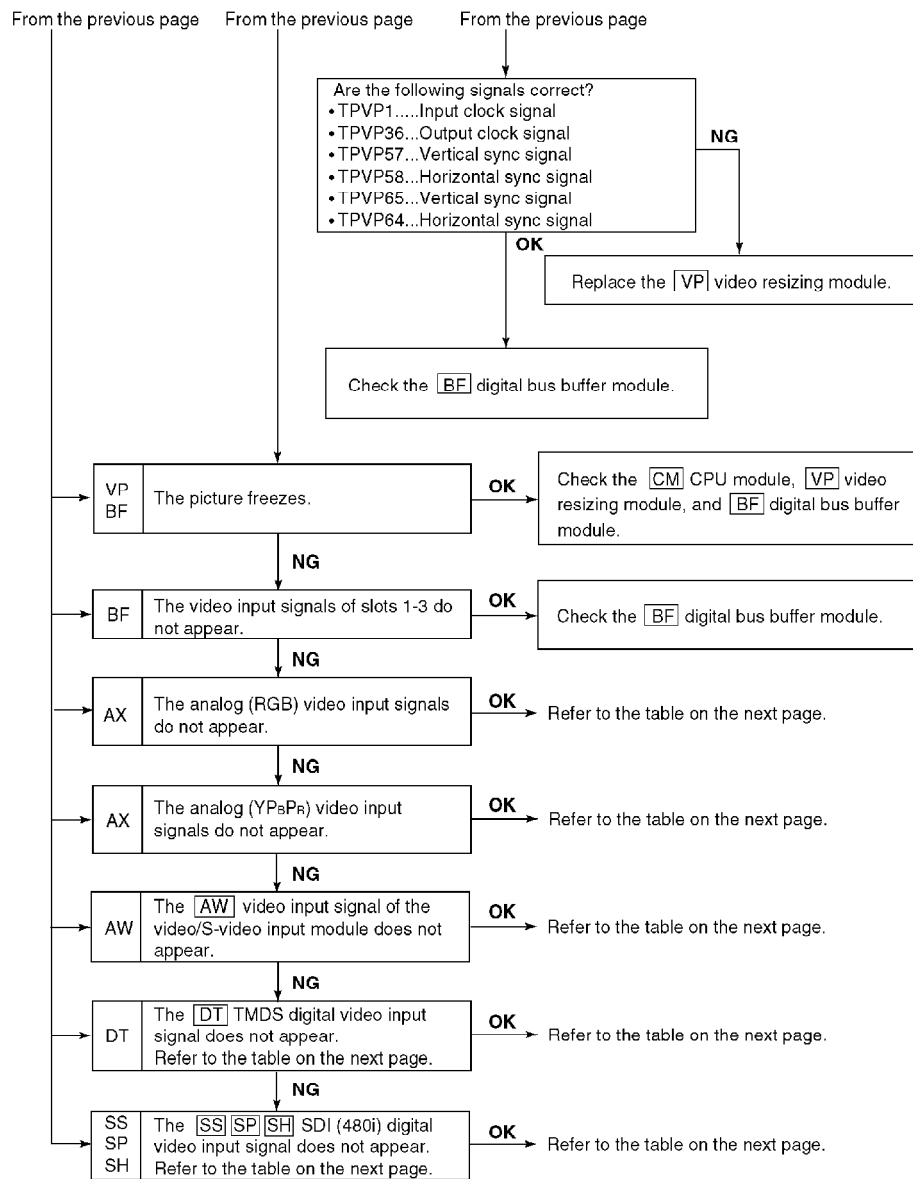
Replace the fan motor.

To the next page



(f) Picture trouble





11.4. Failed modules narrowde down by the relation between input signal and problem (Possibility:high●,middle○,low△)

Problems	Checking Items	Module										
		AX	AW	DT	SS SP SH	MB	MA	BF	AD	VP	GT	FM
The [AX] (RGB) input signals do not appear.	The [AX] (YPbPr) input signals appear.						○				●	
	The [AW] or [SS][SP][SH] input signal appears.	●					△		●		○	
	The [DT] input signal appears.	●				●			●			
	The test patterns appear.	●				●	●		●		△	
	The MENU display does not appear either.						●				●	●
The [AX] (YPbPr) input signals do not appear.	The [AX] (RGB) input signals appear.						△			●	△	
	The [AW] or [SS][SP][SH] input signal appears.	●				●			●			
	The [DT] input signal appears.	●				●			●		△	
	The test patterns appear.	●				●	●		●	●	△	
	The MENU display does not appear either.						●				●	●
The [AW] input signal does not appear.	The [AX] (YPbPr) input signals appear.		●				△	△	●			
	The [AX] (RGB) input signals appear.		●				○	○	●		●	○
	The [DT] input signal appears.		●					△			●	○
	The test patterns appear.		●			●	●	●		●	○	
	The MENU display does not appear either.						●				●	●
The [DT] input signal does not appear.	The [AX] (RGB) input signals appear.			●		●	○	●				
	The [AX] (YPbPr) input signals appear.			●		●	○	●			○	
	The [AW] or [SS][SP][SH] input signal appears.			●			△				○	
	The test patterns appear.			●		●	●	●		●	○	
	The MENU display does not appear either.						●				●	●
The [SS] [SP][SH] input signal does not appear.	The [AX] (RGB) input signals appear.				●	●	○	●		●	△	
	The [AX] (YPbPr) input signals appear.				●	●	○	●			○	
	The [AW] input signal appears.				●							
	The [DT] input signal appears.				●		△			●	○	
	The test patterns appear.				●	●	●	●		●	○	
	The MENU display does not appear either.						●				●	●

Note:

- The following signals can be used instead of the [AX] (YPbPr) input signals.
 - Input a video signal to [G].
 - Input the VGA (31.5kHz / 60Hz) signal and set SYSTEM SELECTOR to the YPbPr mode.
- When the MENU display does not appear either, check that ON-SCREEN is not set to OFF.
- When applying the [AW] input signal, check that the selection of LINE/YC is correct.

12. Using RS-232C Connectors

Because this projector has the RS-232C input connector (D-Sub 9P) and the RS-232C output connector (D-Sub 9P) to externally control the projector according to the RS-232C specifications, using a personal computer allows the control of this projector.

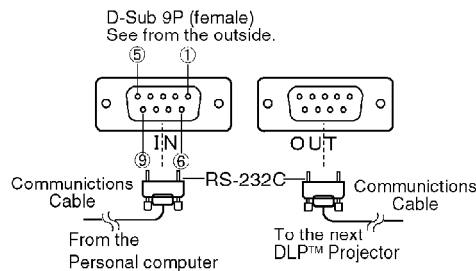
12.1. Pin Configuration and Signal Names of RS-232C Connectors

RS-232C IN

Pin No.	Names	Functions
1	TRI	Unassigned
2	RD	Data transmission
3	SD	Data reception
4	NC	NC
5	FG	GND
6	TRO	Unassigned
7	RS	Demand for transmission
8	CS	Acceptance of transmission
9	NC	NC

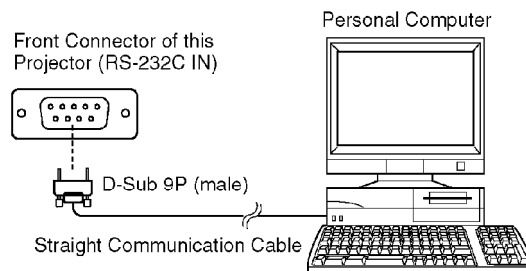
RS-232C OUT

Pin No.	Names	Functions
1	TRO	Unassigned
2	RD	Data reception
3	SD	Data transmission
4	NC	NC
5	FG	GND
6	TRI	Unassigned
7	CS	Acceptance of transmission
8	RS	Demand for transmission
9	NC	NC



12.2. Settings of RS-232C

Set the communications parameters below according to a computer to be connected. To connect the computer, use a straight cable and connect it to the RS-232C input connector.



[Communications parameters]

- Baud rate (bps): 1 200/2 400/4 800/9 600/19 200/38 400/76 800/102 400/122 800/153 600/204 800/307 200

- Parity: ODD/EVEN/NONE

- VPS system: MASTER/SLAVE

- Start & stop bits: 1 bit (fixed)

- Character length: 8 bit (fixed)

- X parameter / S parameter: None

- Synchronization: Start-Stop asynchronous

- GROUP: A-Z/- (no GROUP specification)

MASTER/SLAVE

MASTER: Transfers (returns) the command corresponding to the group.

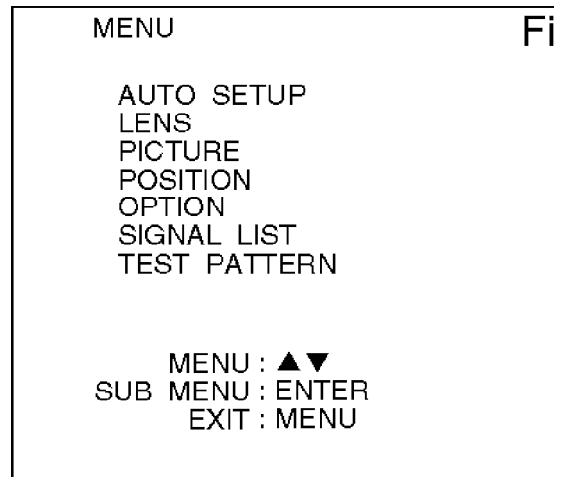
SLAVE: Does not transfers (return) the command corresponding to the group.

Setting Procedure

(1) Press the MENU button.

-The MENU screen will be displayed as shown in Fig. 1 at right.

(2) Select OPTION, using the UP (▲) and DOWN (▼) arrow buttons.



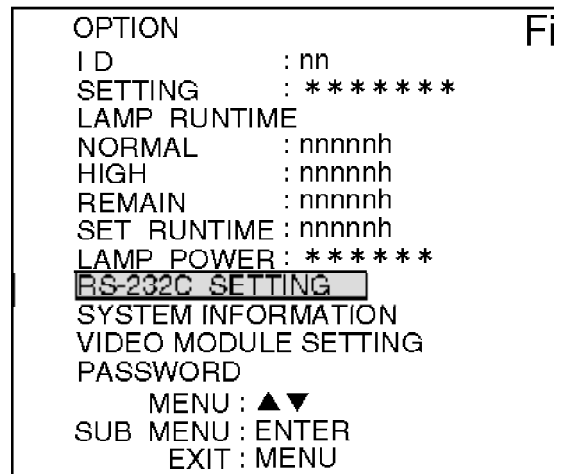
(3) Press the ENTER button.

-The OPTION screen will be displayed as shown in Fig. 2 at right.

(4) Select RS-232C SETTING, using the UP (▲) and DOWN (▼) arrow buttons.

(5) Press the ENTER button.

-The RS-232C SETTING screen will be displayed as shown in Fig. 3 at right.



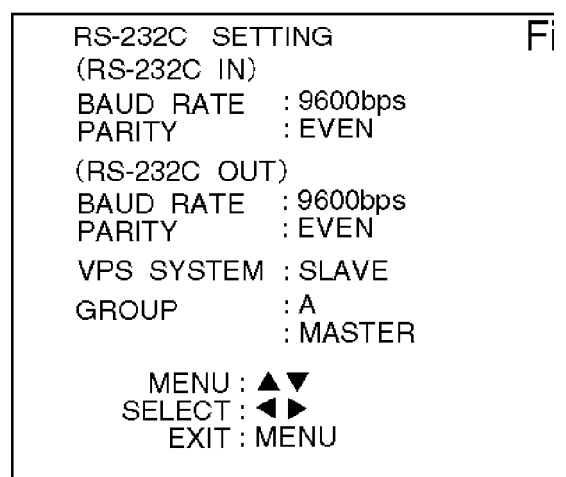
(6) Select a communications parameter, using the UP (▲) and DOWN (▼) arrow buttons.

(7) Set the communications parameter, using the LEFT (◀) and RIGHT (▶) arrow buttons.

-If using two or more projectors, set VPS SYSTEM of the master projector to MASTER and the slave projector(s) to SLAVE.

(8) Press the MENU button three times.

-The on-screen display will disappear and the screen will return to the normal state.



12.3. Basic Control Commands

Codes	Names Target Remote Control Key	Functions (toggle operation)
06	RGB	INPUT RGB
0A	INPUT1	※1 INPUT1
0B	INPUT2	※1 INPUT2
0C	INPUT3	※1 INPUT3
0F	NEXT	NEXT
10	1	※2 SS ?- 1 Selection or Remote control ID setting
11	2	※2 SS ?- 2 Selection or Remote control ID setting
12	3	※2 SS ?- 3 Selection or Remote control ID setting
13	4	※2 SS ?- 4 Selection or Remote control ID setting
14	5	※2 SS ?- 5 Selection or Remote control ID setting
15	6	※2 SS ?- 6 Selection or Remote control ID setting
16	7	※2 SS ?- 7 Selection or Remote control ID setting
17	8	※2 SS ?- 8 Selection or Remote control ID setting
18	9	※2 SS ?- 9 Selection or Remote control ID setting
19	0	※2 SS ?- 10 Selection or Remote control ID setting
35	BRIGHT	BRIGHT
36	CONTRAST	CONTRAST
3B	STD	STD
3D	POWER	POWER
3E	POWER ON	POWER ON
3F	POWER OFF	POWER OFF
40	TEST	TEST PATTERN
58	+	
59	-	
5A	▲	
5B	▼	
5C	◀	
5D	▶	
62	ON SCREEN	On-screen ON/OFF
6D	INPUT	
70	SYSTEM SELECTOR	
72	ENTER	
7A	MENU	
7C	LENS	
91	PICTURE MUTE	

※1: The case of VIDEO/S-VIDEO input board is LINE/Y/C.

※2: SS stands for Signal Selector.

ID List

ID No.	Code specified	ID No.	Code specified	ID No.	Code specified	ID No.	Code specified	ID No.	Code specified	ID No.	Code specified
ALL	00h	17	11h	34	22h	51	33h	Group A	80h	Group R	91h
1	01h	18	12h	35	23h	52	34h	Group B	81h	Group S	92h
2	02h	19	13h	36	24h	53	35h	Group C	82h	Group T	93h
3	03h	20	14h	37	25h	54	36h	Group D	83h	Group U	94h
4	04h	21	15h	38	26h	55	37h	Group E	84h	Group V	95h
5	05h	22	16h	39	27h	56	38h	Group F	85h	Group W	96h
6	06h	23	17h	40	28h	57	39h	Group G	86h	Group X	97h
7	07h	24	18h	41	29h	58	3Ah	Group H	87h	Group Y	98h
8	08h	25	19h	42	2Ah	59	3Bh	Group I	88h	Group Z	99h
9	09h	26	1Ah	43	2Bh	60	3Ch	Group J	89h		
10	0Ah	27	1Bh	44	2Ch	61	3Dh	Group K	8Ah		
11	0Bh	28	1Ch	45	2Dh	62	3Eh	Group L	8Bh		
12	0Ch	29	1Dh	46	2Eh	63	3Fh	Group M	8Ch		
13	0Dh	30	1Eh	47	2Fh	64	40h	Group N	8Dh		
14	0Eh	31	1Fh	48	30h			Group O	8Eh		
15	0Fh	32	20h	49	31h			Group P	8Fh		
16	10h	33	21h	50	32h			Group Q	90h		

Reception: [STX (02h)] [ID NO] [Each command (1-3BYTE)] [ETX (03h)]

Reply: [STX (02h)] [ID NO] [Each command (1-3BYTE)] [ETX (03h)]

12.4. Direct Control Commands (A1h)

Reception: [STX] [ID NO] [A1h] [Each command] [Parameter or DATA] [ETX]
Reply: [STX] [ID NO] [A3h] [Each command] [Parameter or DATA] [ETX]

1. RGB [CODE 06h]

RGB Input Selection

Reception (PC → DLP): [STX] [ID NO] [A1h] [06h] [Parameter] [ETX]

Reply (PC ← DLP): [STX] [ID NO] [A3h] [* *h] [Parameter] [ETX]

Parameter CODE

00h Inquiry about the input selection status

01h RGB input selection

*1 For the parameter 00h, the present input status will be transmitted.

Example: during RGB input selection

Reception (PC → DLP): [STX] [ID NO] [A1h] [06h] [00h] [ETX]

Reply (PC ← DLP): [STX] [ID NO] [A3h] [06h] [01h] [ETX]

2. INPUT1 [CODE 0Ah]

SLOT1 Selection

Reception (PC → DLP): [STX] [ID NO] [A1h] [0Ah] [Parameter] [ETX]

Reply (PC ← DLP): [STX] [ID NO] [A3h] [* *h] [Parameter] [ETX]

Parameter CODE

00h Inquiry about the input selection status

01h SLOT1 selection (The case of VIDEO / S-VIDEO input board is LINE.)

02h SLOT1 selection (The case of VIDEO / S-VIDEO input board is Y/C.)

FFh SLOT equipped with no board

3. INPUT2 [CODE 0Bh]

SLOT2 Selection

Reception (PC → DLP): [STX] [ID NO] [A1h] [0Bh] [Parameter] [ETX]

Reply (PC ← DLP): [STX] [ID NO] [A3h] [* *h] [Parameter] [ETX]

Parameter CODE

00h Inquiry about the input selection status

01h SLOT2 selection (The case of VIDEO / S-VIDEO input board is LINE.)

02h SLOT2 selection (The case of VIDEO / S-VIDEO input board is Y/C.)

FFh SLOT equipped with no board

4. INPUT3 [CODE 0Ch]

SLOT3 Selection

Reception (PC → DLP): [STX] [ID NO] [A1h] [0Ch] [Parameter] [ETX]

Reply (PC ← DLP): [STX] [ID NO] [A3h] [* *h] [Parameter] [ETX]

Parameter CODE

00h Inquiry about the input selection status

01h SLOT3 selection (The case of VIDEO / S-VIDEO input board is LINE.)

02h SLOT3 selection (The case of VIDEO / S-VIDEO input board is Y/C.)

FFh SLOT equipped with no board

5. TEST [CODE 40h]

Test Pattern Selection and Switching

Reception (PC → DLP): [STX] [ID NO] [A1h] [40h] [Parameter] [ETX]

Reply (PC ← DLP): [STX] [ID NO] [A3h] [40h] [Parameter] [ETX]

Parameter CODE

00h Inquiry about the test pattern status

01h OFF

02h ALL WHITE

03h ALL BLACK

04h H GRAY SCALE

05h H GRAY SCALE (reversal)

06h V GRAY SCALE

07h V GRAY SCALE (reversal)

08h HATCH

09h HATCH (reversal)

0ah DOT

0bh DOT (reversal)

0ch COLOR BAR

0dh WINDOW

0eh WINDOW (reversal)

0fh FLAG
10h FLAG (reversal)
11h CONVERGENCE
12h FOCUS

6. COLOR TEMP [CODE 68h]

Color Temperature Switching

Reception (PC \rightarrow DLP): [STX] [ID NO] [A1h] [68h] [Parameter] [ETX]

Reply (PC \leftarrow DLP): [STX] [ID NO] [A3h] [68h] [Parameter] [ETX]

Parameter CODE

00h Inquiry about the color temperature status
01h COLOR TEMP LOW
02h COLOR TEMP MID
03h COLOR TEMP HIGH
04h COLOR TEMP USER
05h COLOR TEMP DYNAMIC

7. POWER [CODE 3Dh]

Power ON/OFF

Reception (PC \rightarrow DLP): [STX] [ID NO] [A1h] [3Dh] [Parameter] [ETX]

Reply (PC \leftarrow DLP): [STX] [ID NO] [A3h] [3Dh] [Parameter] [ETX]

Parameter CODE

00h Inquiry about the power-on/off status
01h POWER ON
02h POWER OFF

8. SS SELECT [CODE 8Fh]

Selection of Signal Selector (option)

Reception: [STX] [ID NO] [A1h] [8Fh] [Parameter] [ETX]

Reply: [STX] [ID NO] [A3h] [8Fh] [Parameter] [ETX]

Parameter Explanation

MSB							LSB	Contents
7	6	5	4	3	2	1	0	
0	0	*	*	*	*	*	*	Not optional
0	1	*	*	*	*	*	*	RGB
1	0	*	*	*	*	*	*	LINE ※1
1	1	*	*	*	*	*	*	Y/C ※1
*	*	0	0	*	*	*	*	The 1st SS
*	*	0	1	*	*	*	*	The 2nd SS
*	*	1	0	*	*	*	*	The 3rd SS
*	*	1	1	*	*	*	*	The 4th SS
*	*	*	*	0	0	0	0	Channel 1
*	*	*	*	0	0	0	1	Channel 2
*	*	*	*	0	0	1	0	Channel 3
*	*	*	*	0	0	1	1	Channel 4
*	*	*	*	0	1	0	0	Channel 5
*	*	*	*	0	1	0	1	Channel 6
*	*	*	*	0	1	1	0	Channel 7
*	*	*	*	0	1	1	1	Channel 8
*	*	*	*	1	0	0	0	Channel 9
*	*	*	*	1	0	0	1	Channel 10

※1: When two or more boards are installed, the slot of a lower number will be selected.

Example: The RGB input of channel 3 of the first signal selector is selected.

Reception: [STX] [ID NO] [A1h] [8Fh] [42fh] [ETX]

Reply: [STX] [ID NO] [A3h] [8Fh] [42fh] [ETX]

Command for a status inquiry [CODE A2h]

Reception (PC → DLP): [STX] [ID NO] [A2h] [Each command] [Parameter] [ETX]

Reply (PC ← DLP): [STX] [ID NO] [A3h] [Each command] [Parameter or DATA] [ETX]

1. RGB [CODE 06h]
2. INPUT1 [CODE 0Ah]
3. INPUT2 [CODE 0Bh]
4. INPUT3 [CODE 0Ch]
5. TEST [CODE 40h]
6. COLOR TEMP [CODE 68h]
7. POWER [CODE 3Dh]
8. SS SELECT [CODE 8Fh]

MODEL NO. [CODE 85h]

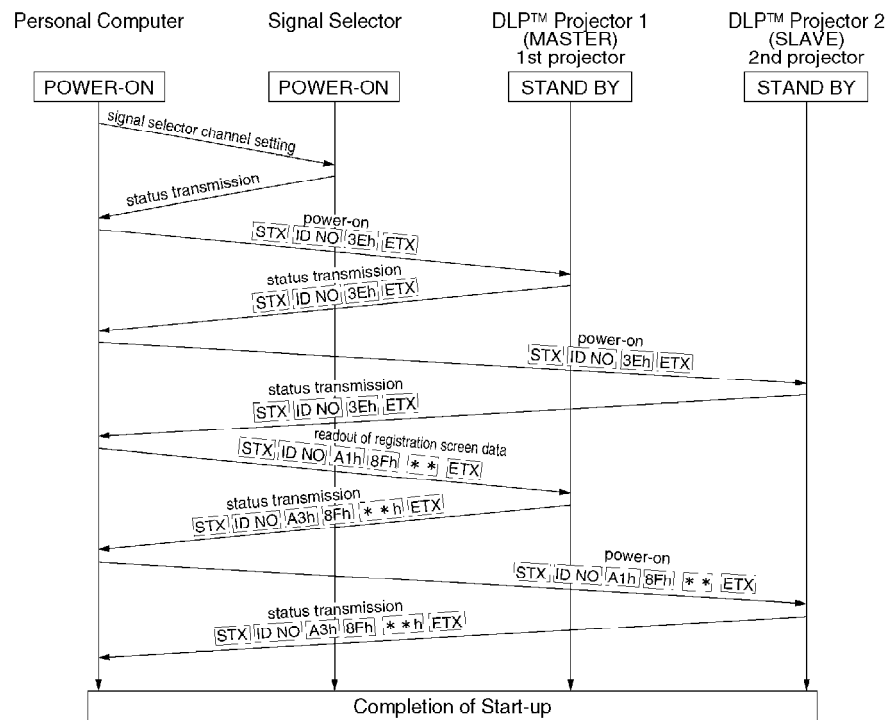
Model Number Retrieval

Reception (PC → DLP): [STX] [ID NO] [85h] [ETX]

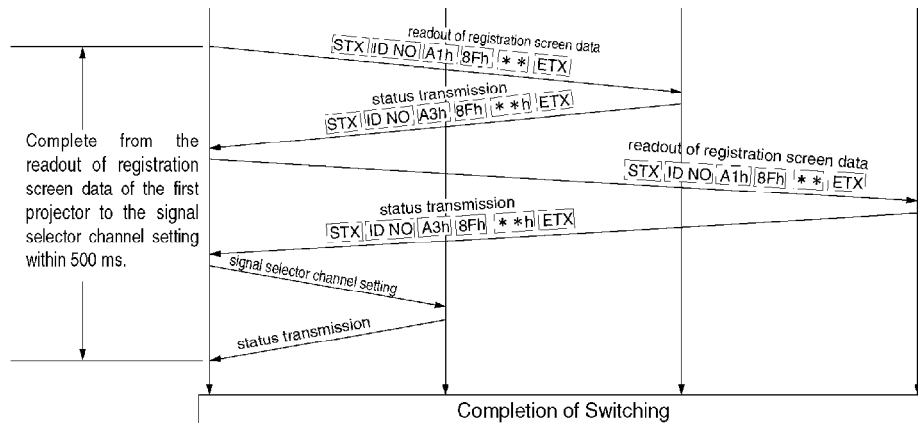
Reply (PC ← DLP): [STX] [ID NO] [85h] [41h] [20h] [ETX]

12.5. Communications Sequence of Signal Selector

12.5.1. Power-on Sequence



12.5.2. Input Signal Switching Sequence



★: For the portion marked with " * * " in the readout command of registration screen data, refer to SS SELECT (8Fh) in the section "Direct Control Command (A1h)" .

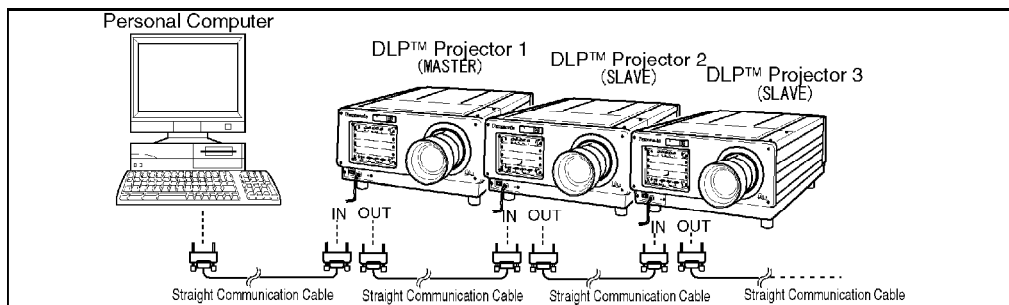
12.6. RS-232C MASTER / SLAVE Connections

When establishing the cascade connection of RS-232C, set one PT-D8500U/E to VPS SYSTEM: MASTER and other PT-D8500U/Es to VPS SYSTEM: SLAVE. The connection examples are shown below.

1. Connection with a personal computer

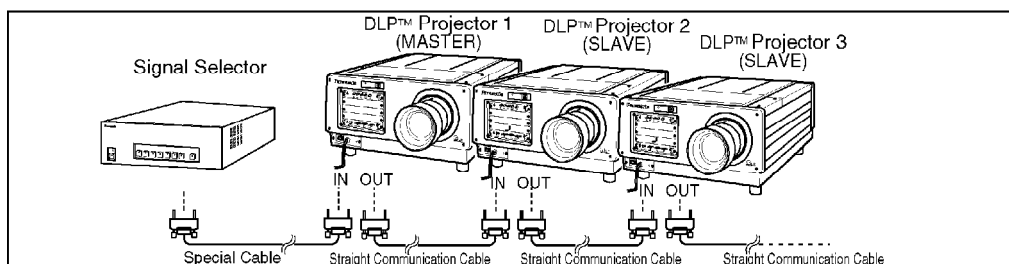
* Use straight cables for all the connections among elements.

- For commands with ID ALL, the master projector will reply to the personal computer.
- For commands with an ID, a slave projector with its ID will reply.

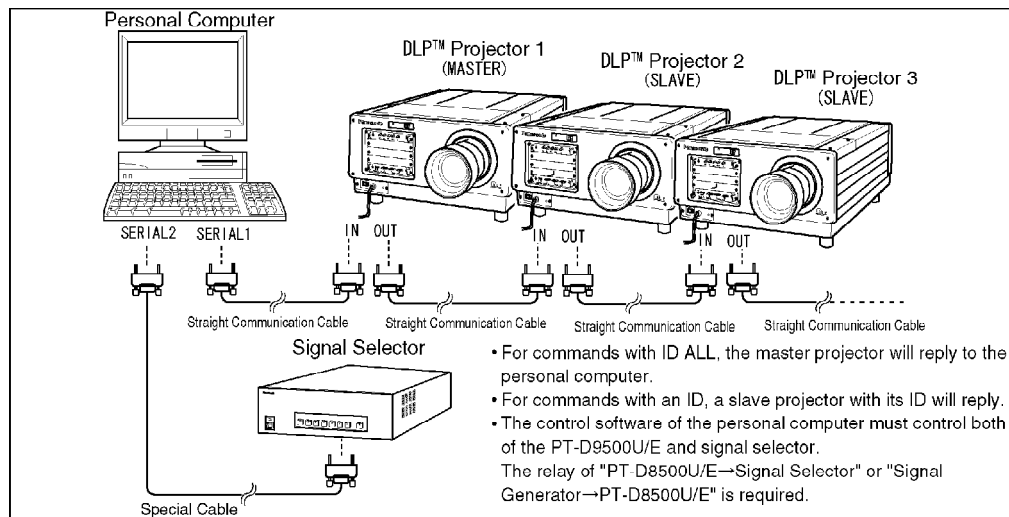


2. Connection with a signal selector

- For the switching commands, the master projector will reply to the personal computer.



- 3. Connection with both of a personal computer and signal selector**
*** Use straight cables for all the connections among elements, but use a special cable between the personal computer and signal selector.**



13. Adjustment

Perform the following adjustments when changing the optical tube.

13.1. Adjusting the optical tube mirror.

(This adjustment is necessary if the lighting area positioning is altered by replacement of the optical tube.)

Step1

As shown in Fig. 1, use a hexagonal wrench to slightly turn the three adjuster screws of the optical tube mirror. Fine adjustments should be made so that the position of the lighting area lines up with the screen.

Step2

The direction of movement of the lighting area on the screen is shown by the arrows in Fig. 2.

- Turning screw 1 to the right moves the lighting area to the upper left of the screen.
- Turning screw 2 to the right moves the lighting area to the lower left of the screen.
- Turning screw 3 to the right moves the lighting area to the upper right of the screen.
- Normally only screws 1 and 2 need to be used for adjustment. If adjustments cannot be made with just these two, then adjust using screw 3 also.

(If all three screws are used for adjustment and the screws need to be rotated more than half a turn, perform rod prism adjustment.)

Step3

After adjustment is complete, seal the screws with adhesive. (Adhesive: Threebond 1401B)

13.2. Rod prism adjustment

Step1

Loosen the two screws as shown in Fig. 2.

Step2

Move the rod prism back and forth along the optical axis to make the focus of the perimeter of the lighting area uniform, and then tighten the screws.

Step3

After adjustment is complete, seal the screws with adhesive. (Adhesive: Threebond 1401B)

Fig. 1

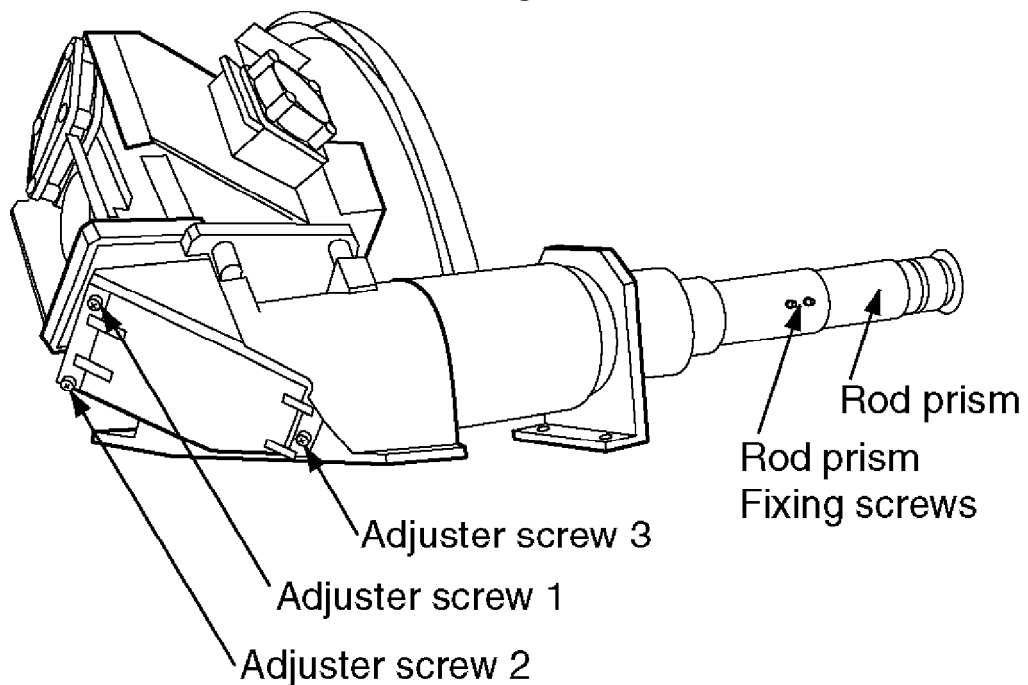
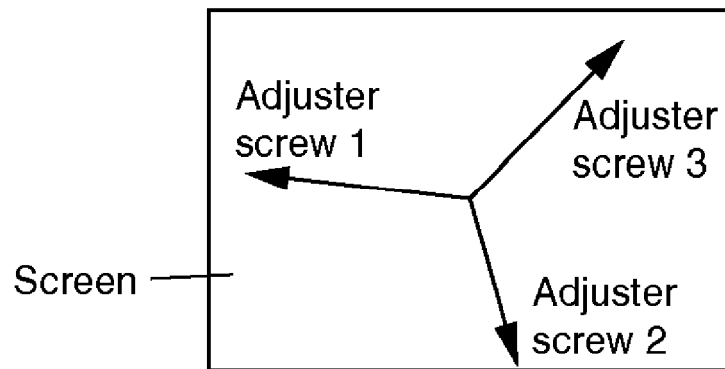


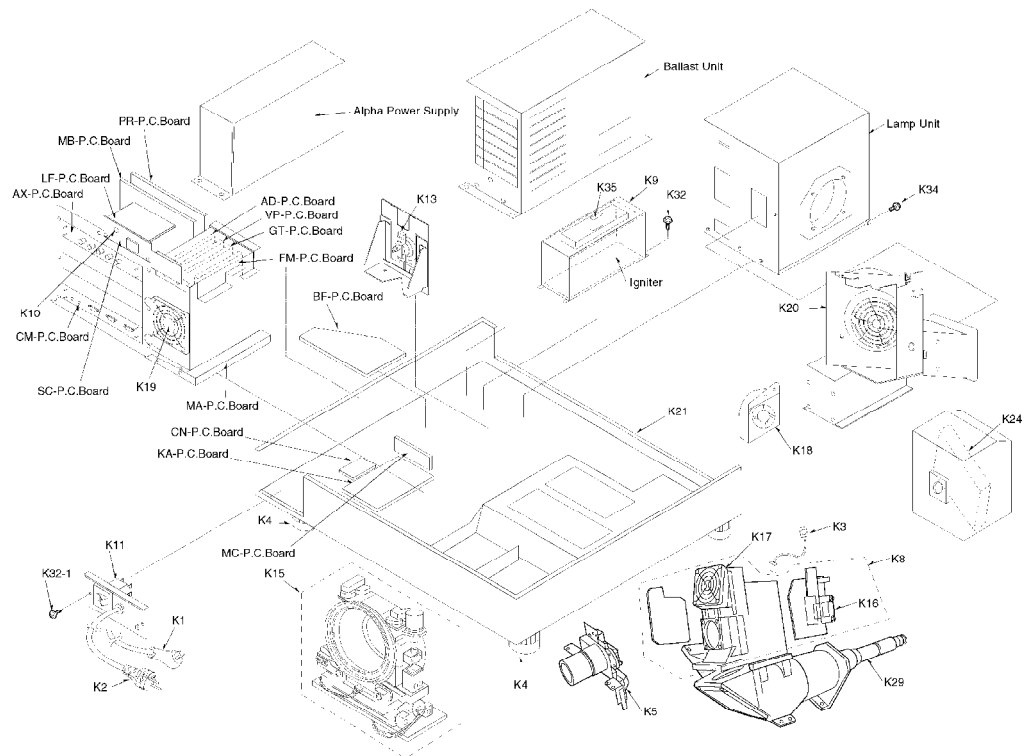
Fig. 2



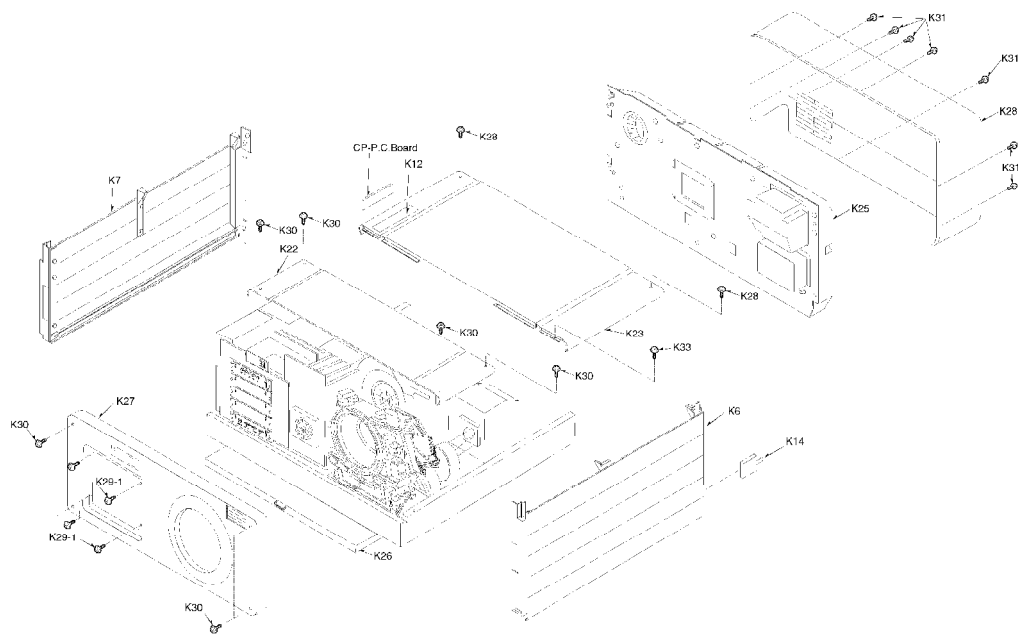
14. Interconnection Block Diagram

15. Exploded Views

15.1. Exploded View (1)




15.2. Exploded View (2)



16. Replacement Parts List

Important Safety Notice

Components identified by the International symbol  have special characteristics important for safety. When replacing any of these components, use only the manufacturer's specified parts.

Abbreviation of part name and description

1. Resistor

Example:

ERD25TJ104 C 100KOHM, J, 1/4W

TYPE	ALLOWANCE
TYPE	ALLOWANCE
C : Carbon	F : $\pm 1\%$
F : Fuse	G : $\pm 2\%$
M : Metal Oxide	J : $\pm 5\%$
Metal Film	K : $\pm 10\%$
S : Solid	M : $\pm 20\%$
W : Wire Wound	

2. Capacitor

Example:

ECKF1H103ZF C 0.01PF, Z, 50V

TYPE	ALLOWANCE
TYPE	ALLOWANCE
C : Ceramic	C : $\pm 0.25\text{ pF}$
E : Electrolytic	D : $\pm 0.5\text{ pF}$
P : Polyester	F : $\pm 1\text{ pF}$
PP : Polypropylene	J : $\pm 5\%$
S : Polystyrol	K : $\pm 10\%$
T : Tantalum	L : $\pm 15\%$
	M : $\pm 20\%$
	P : $+100\%, -0\%$
	Z : $+80\%, -20\%$

Note: For G * * of Ref. No., not indicate illustration of it part on "Exploded Views".

Printed circuit board assembly with mark (RTL) is no longer available after production discontinuation of the complete set.

Ref. No.	Part No.	Part Name & Description	Remarks
[MECHANICAL PARTS]			
K1	K2CA3EZ00001	POWER CORD	For PT-D8500U 
K2	K2CA3FZ00001	POWER CORD	For PT-D8500E 
G1	K4EG12A00002	CABLE E	IGNITER-BALLAST(RED)
G2	K4EG14A00001	CABLE D	IGNITER-BALLAST
K3	TAT111G164Z	THERMISTOR	
K4	TBLG3021	ADJUSTER	
K5	TGAX014	SHUTTER ASSY	
G3	TJSX02900	LAMP UNIT TERMINAI	
K6	TKCF013-2	SIDE CABINET (RIGHT)	
K7	TKCF014-1	SIDE CABINET(LEFT)	
K8	TKGX5009	DMD ASSY	
K9	TKKL5097	IGNITER COVER	
G4	TKPA33902	BLINDFOLD METAL	
G5	TMME026	CLAMPER	
K10	TMM14929	REMOCN RECEIVER	
G6	TMM16473-1	CLAMPER	
G7	TMM6428-1	CLAMPER	
G8	TMM6463-1	CLAMPER	
G9	TMM7464-2	CLAMPER	
G10	TMM7468-1	CLAMPER	
G11	TMX13439	GUIDE	
G12	TMX13440	GUIDE	
G13	TNQE219	REMOTE CONTROLLER	
K11	TNXA001	BREAKER	
K12	TNXX020-1	CONTROL SWITCH	
G14	TPCA62201	REMOTE CONTROLLER CASE	
G15	TPCA78501A	CARTON (BOTTOM)	
G16	TPDA0393	LENS PAD	
G17	TPDF0432	ANGLE	
G18	TPDJ0037-1	CUSHION (UPPER)	
G19	TPDJ0038-1	CUSHION (BOTTOM)	
G20	TPD139464	CUSHION	
G21	TPD169504	P.P BELTE	
G22	TPEH103	CUSHION	
G23	TPE174176	SET COVER	
G24	TQBJ0075	INSTRUCTION BOOK	For PT-D8500U
G24	TQBJ0076	INSTRUCTION BOOK	For PT-D8500E
G25	TQB817002-1	SAFETY SHEET	For PT-D8500U only
G26	TQD1712010	LABEL	
G27	TQDJ18007	GUARANTEE CARD	For PT-D8500U only
G28	TQF14816	LABEL	
G29	TSEG0002	MICROSWITCH	
K13	TSEX0013	BIMETAL	
K14	TSEX8005	INTERLOCK SWITCH	
G30	TSK1027	FERRITE CORE	
G31	TSXF139	CABLE	
G32	TSXF187	CABLE	
G33	TSXL178	FFC CABLE	DMD - P.C.B.(FM)
G34	TSX1565	REMOCON CABLE	

Ref. No.	Part No.	Part Name & Description	Remarks
G35	TSX1598	CABLE	
G36	TSX2505	CABLE	
G37	TUWC029-1	POWER SW METAL	For PT-D8500U
G38	TUWC026-4	POWER SW METAL	For PT-D8500E
K15	TXFED02VJE7	LENS MOUNT ASSY	
G38	TXFEK01VJE7	TEC FAN (R) ASSY	⚠
G39	TXFEK02VJE7	TEC FAN (G) ASSY	⚠
K16	TXFEK03VJE7	TEC FAN (B) ASSY	⚠
K17	TXFEK04VJE7	FAN(For ABSORBER)	⚠
K18	TXFEK05VJE7	FAN(For DMDTM)	⚠
K19	TXFEK08VJE7	FAN(For P.C.BOARD)	⚠
G40	TXFEK12VHX81	MOTOR(SHUTTER)	⚠
K20	TXFEK14VJE7	LAMP FAN BLOCK	⚠
K21	TXFKC02VJE7	BOTTOM BASE	
K22	TXFKC06VJE7	UPPER CABINET (REAR)	
K23	TXFKC98VHX8	UPPER CABINET (FRONT)	
K24	TXFKG02VJE7	COLD MIRROR	
K25	TXFKK01VJE7	DUCT ASSY	
K26	TXFKK02VJE7	AIR FILTER ASSY	
K27	TXFKP01PHWZ	FRONT PANEL ASSY	For PT-D8500U
K27	TXFKP01PHXZ	FRONT PANEL ASSY	For PT-D8500E
K28	TXFKX01PHWZ	REAR PANEL ASSY	For PT-D8500U
K28	TXFKX01PHXZ	REAR PANEL ASSY	For PT-D8500E
G41	TXFPC01PHWZ	CARTON (UPPER)	For PT-D8500U
G41	TXFPC01PHXZ	CARTON (UPPER)	For PT-D8500E
K29	TKGX5004	OPTICAL TUBE	
K29-1	XSB3+8FC	SCREW	
K30	XSB4+8FC	SCREW	
K31	XSN4+12FZ	SCREW	
G43	XTB4+10J	SCREW	
G44	XTB4+12A	SCREW	
K32	XTB4+12J	SCREW	
G45	XTB4+16JFZ	SCREW	
G46	XTV3+10J	SCREW	
G47	XTV3+6J	SCREW	
G48	XTV3+8J	SCREW	
G49	XYN3+C10	SCREW	
G50	XYN3+C6	SCREW	
G51	XYN3+C8FZ	SCREW	
G52	XYN3+F10	SCREW	
G53	XYN3+F8	SCREW	
K32 -1	XYN4+C10FZ	SCREW	
G54	XYN4+E8FZ	SCREW	
K33	XYN4+F10	SCREW	
G55	XYN4+F15	SCREW	
G56	XYN4+F20	SCREW	
K34	XYN4+F20FZ	SCREW	
G57	XYN5+F10	SCREW	
G58	XYN5+F20FZ	SCREW	
G59	XYN6+F10	SCREW	
G60	XYN6+F15	SCREW	

Ref. No.	Part No.	Part Name & Description	Remarks
G61	XZB11X22C05	POLY BAG	
[CAPACITORS]			
K35	ECWS22105JK7	CAPACITOR	For Igniter
[OTHERS]			
RTL	N0AE6ZL00001	CIRCUIT BOARD	ALPHA POWER SUPPLY ⚠
RTL	TNAD016-1	IGNITER	⚠
RTL	TNAD019	CIRCUIT BOARD CN	STANDBY POWER SUPPLY ⚠
RTL	TNAD021	BALLAST UNIT	⚠
RTL	TNPA1568	CIRCUIT BOARD CP	
RTL	TNPH0285	CIRCUIT BOARD MA	
RTL	TNPH0411	CIRCUIT BOARD MC	
RTL	TXN/ADVHX8	CIRCUIT BOARD AD	
RTL	TXN/AXVHX8-K	CIRCUIT BOARD AX	
RTL	TXN/BFVHX8	CIRCUIT BOARD BF	
RTL	TXN/CMVJE7	CIRCUIT BOARD CM	
RTL	TXN/FMVJE7	CIRCUIT BOARD FM	
RTL	TXN/GTVJE7	CIRCUIT BOARD GT	
RTL	TXN/KAVJE7	CIRCUIT BOARD KA	⚠
RTL	TXN/LFVJE7	CIRCUIT BOARD LF	
RTL	TXN/MBVHX8	CIRCUIT BOARD MB	
RTL	TXN/PRVJE7	CIRCUIT BOARD PR	
RTL	TXN/SCVHX8	CIRCUIT BOARD SC	
RTL	TXN/VPVHX8-K	CIRCUIT BOARD VP	

※1 : These modules are optional (sold separately) parts.
Described parts number is in () replacement parts number.

